CHAPTER 2 ASSESSMENT OF COMPREHENSIVE DEVELOPMENT MASTER PLAN ELEMENTS

Introduction

Section 163.3191(2)(h), F.S. requires the EAR to provide a brief assessment of the successes and shortcomings related to each element of the local government's comprehensive plan since the 1995 EAR. Accordingly, this chapter of the EAR evaluates the progress that has been made toward achieving the adopted objectives of each element of the plan since 1995. Each objective in each element of the plan is listed, followed by the monitoring measure, or measures that were adopted as part of the element's monitoring program. In instances where there was no appropriate monitoring measure adopted or where the adopted measure could not be used to adequately measure achievement, a surrogate measure was used. In those cases, policy implementation was also used to determine the degree of objective achievement.

All objectives, monitoring measures and policies were reviewed for their continued relevance. Suggested revisions to certain objectives and/or policies are included in the Proposed Revisions section of this report. Although it may not be explicitly stated in each element assessment, all references in the CDMP to names of places, agencies, departments, documents, time horizons, etc. will be updated and corrected as part of any proposed EAR-based amendments to the CDMP.

2.1 LAND USE ELEMENT

The Land Use Element is where the growth policy for the County is articulated. This element identifies locations in Miami-Dade County where various land uses and intensities of use will be permitted to occur in the future. It establishes and articulates broad policy in keeping with the traditional role of the metropolitan area comprehensive plan as a framework for, or schematic plan of, areawide future development. The overall growth policy is that the intensification of physical development and expansion of the urban area should be managed to occur: 1) at a rate of land development activity that is commensurate with projected population and economic growth; 2) in a contiguous pattern centered around high intensity activity centers well connected by a balanced transportation network; and 3) growth in areas and locations which optimize efficiency in public service delivery and conservation of natural resources. The goal of this element is to "provide the best possible distribution of land use and services to meet the physical, social, cultural and economic needs of the present and future populations in a timely and efficient manner that will maintain or improve the quality of the natural and man-made environment and amenities, and preserve Miami-Dade's unique agricultural lands." The Land Use Element embodies a number of objectives and policies that form the framework for ensuring the achievement of this goal. The *Adopted Components* of the Land Use Element include the Land Use Goal, Objectives and Policies, the Land Use Plan map for 2005 and 2015 and related text titled "Interpretation of the Land Use Plan Map: Policy of the Land Use Element", maps of future historical and natural resources, and a monitoring program.

All Maps and figures in this Element should be updated as necessary.

Objective 1

The location and configuration of Miami-Dade County's urban growth through the year 2015 shall emphasize concentration and intensification of development around centers of activity, development of well designed communities containing a variety of uses, housing types and public services, renewal and rehabilitation of blighted areas, and contiguous urban expansion when warranted, rather than sprawl.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

A. Acreage of subdivisions not contiguous to other urban development; and population density within the UDB of the LUP map.
B. Residential dwelling units and non-residential square footage permitted, or for which certificates of use and occupancy (CO's) have been issued (for new uses and rehabilitation) in unincorporated Community Development (CD) Areas.
C. Numbers and dollar value of public facility improvements in CD Areas.
D. Number of new or revised ordinances and programs established to promote improved design of neighborhoods, developments and buildings in unincorporated Dade County.

Objective Achievement Analysis. The following discussion analyzes the achievement of each of the individual monitoring measures.

Measure A**.** The measure requests two types of information, acreage of subdivisions not contiguous to other urban development and population density within the UDB. Information on population density within the UDB, which was 8.4 persons per acre or 5373 persons per square mile in 2000, is available. The density within the UDB has increased from 1990 when it was 4400 persons per square mile. However, information on the acreage of subdivisions not contiguous to other urban development is not available.

The purpose of measuring subdivisions not contiguous to other urban development is to ascertain if leapfrog development patterns are occurring in Miami-Dade County. This objective promotes "contiguous urban expansion when warranted, rather than sprawl." A surrogate approach to addressing this concern is to examine the spatial patterns of subdivision activity in areas where leapfrog development is more likely to occur.

Figure 2.1-1 shows as of 2001 the subdivision activity and developed land outside the UDB in the Redland area of South Miami-Dade. This figure depicts only a few scattered subdivisions in this area. A comparison of 1994 and 2001 land use patterns shows that very limited development has occurred in these subdivisions since 1994. Another pattern is evident when reviewing this figure. The area inside or on the east side of the UDB has extensive subdivision activity along the boundary, but the area on the west side of the UDB has very little subdivision activity. This pattern of subdivision activity indicates that the UDB has been successful in preventing sprawl in this area.

Figure 2.1-2 depicts as of 2001 the subdivision activity and developed land inside the UDB between the suburban areas of Naranja and Cutler Ridge. This area is one of the few locations within the UDB where extensive areas of agriculture still exist. A large area without developed subdivisions still exists between SW 228 and 248 Streets. This pattern indicates that leapfrog development is limited even inside the UDB.

Measure B. The information on residential dwelling units and non-residential square footage permitted in unincorporated Community Development (CD) Areas is not available. The surrogate approach that was used in the 1995 EAR is also not available. That 1995 approach was to review the Community Development Block Grant (CDBG) assistance that was provided to the Focus Areas, now known as Neighborhood Revitalization Strategy Areas (NRSAs). However, this information is no longer available for these neighborhoods since the Office of Community and Economic Development (OCED) provides this information on assistance supplied only on Commission District basis.

The purpose of measuring residential dwelling units and non-residential square footage permitted in unincorporated Community Development (CD) Areas is to determine if revitalization efforts in these low-and-moderate income neighborhoods have been successful. This objective promotes the renewal and rehabilitation of blighted areas. The surrogate approach for this EAR is to compare the change in housing units and poverty rates in these areas between 1990 and 2000 based on information from the US Census.

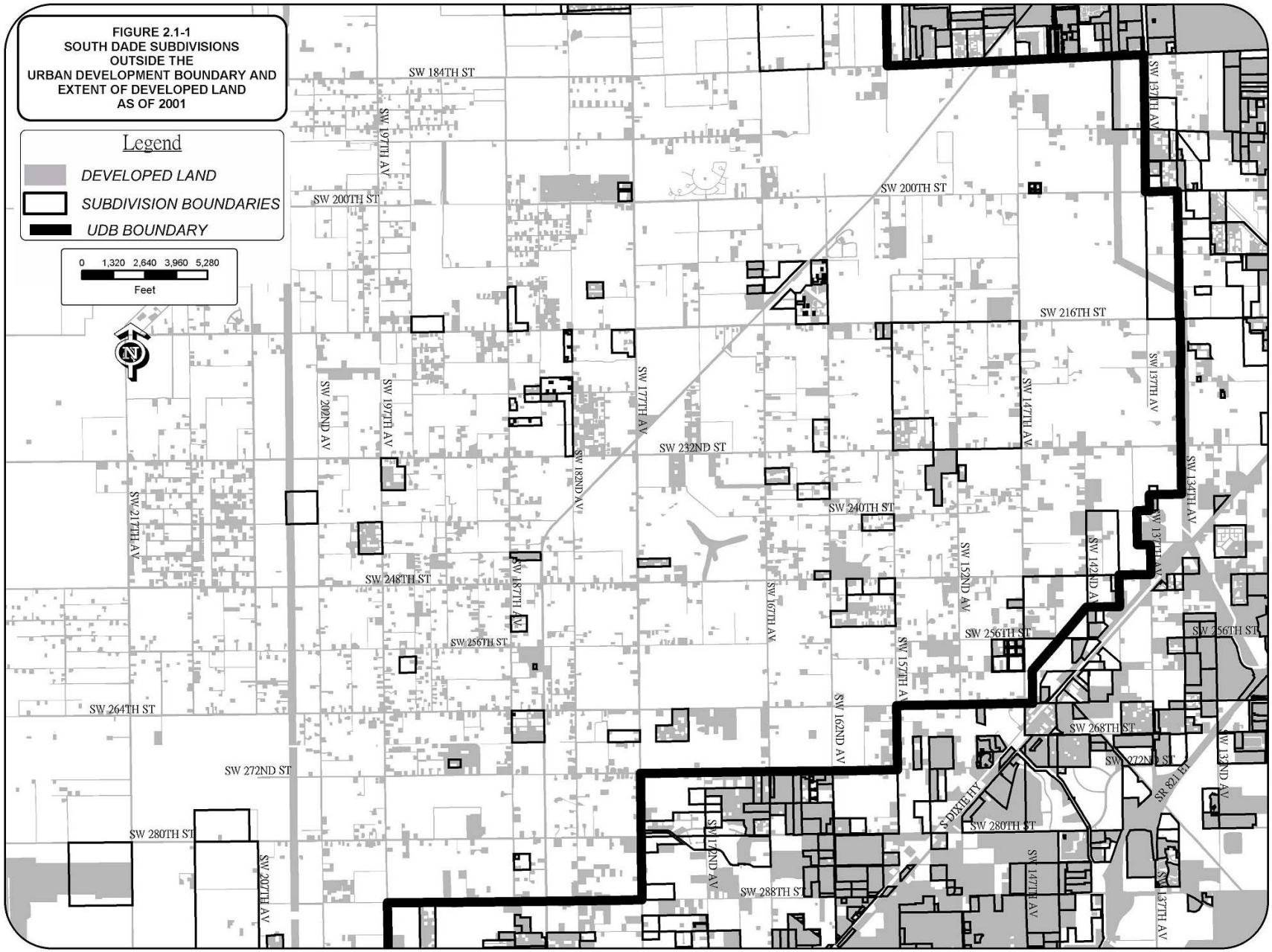
FIGURE 2.1-1
SOUTH DADE SUBDIVISIONS
OUTSIDE THE
URBAN DEVELOPMENT BOUNDARY AND
EXTENT OF DEVELOPED LAND
AS OF 2001
Legend
DEVELOPED LAND
SUBDIVISION BOUNDARIES
UDB BOUNDARY
0 1,320 2,640 3,960 5,280
Feet
N
SW 184TH ST
SW 197TH AV
SW 200TH ST
SW 200TH ST
SW 137TH AV
SW 216TH ST
SW 202ND AV
SW 197TH AV
SW 177TH AV
SW 147TH AV
SW 137TH AV
SW 232ND ST
SW 182ND AV
SW 134TH AV
SW 240TH ST
SW 217TH AV
SW 137TH AV
SW 152ND AV
SW 142ND AV
SW 248TH ST
SW 187TH AV
SW 167TH AV
SW 256TH ST
SW 256TH ST
SW 157TH AV
SW 264TH ST
SW 162ND AV
SW 268TH ST
SW 272ND ST
SW 272ND ST
SW 132ND AV
SR 821 EB
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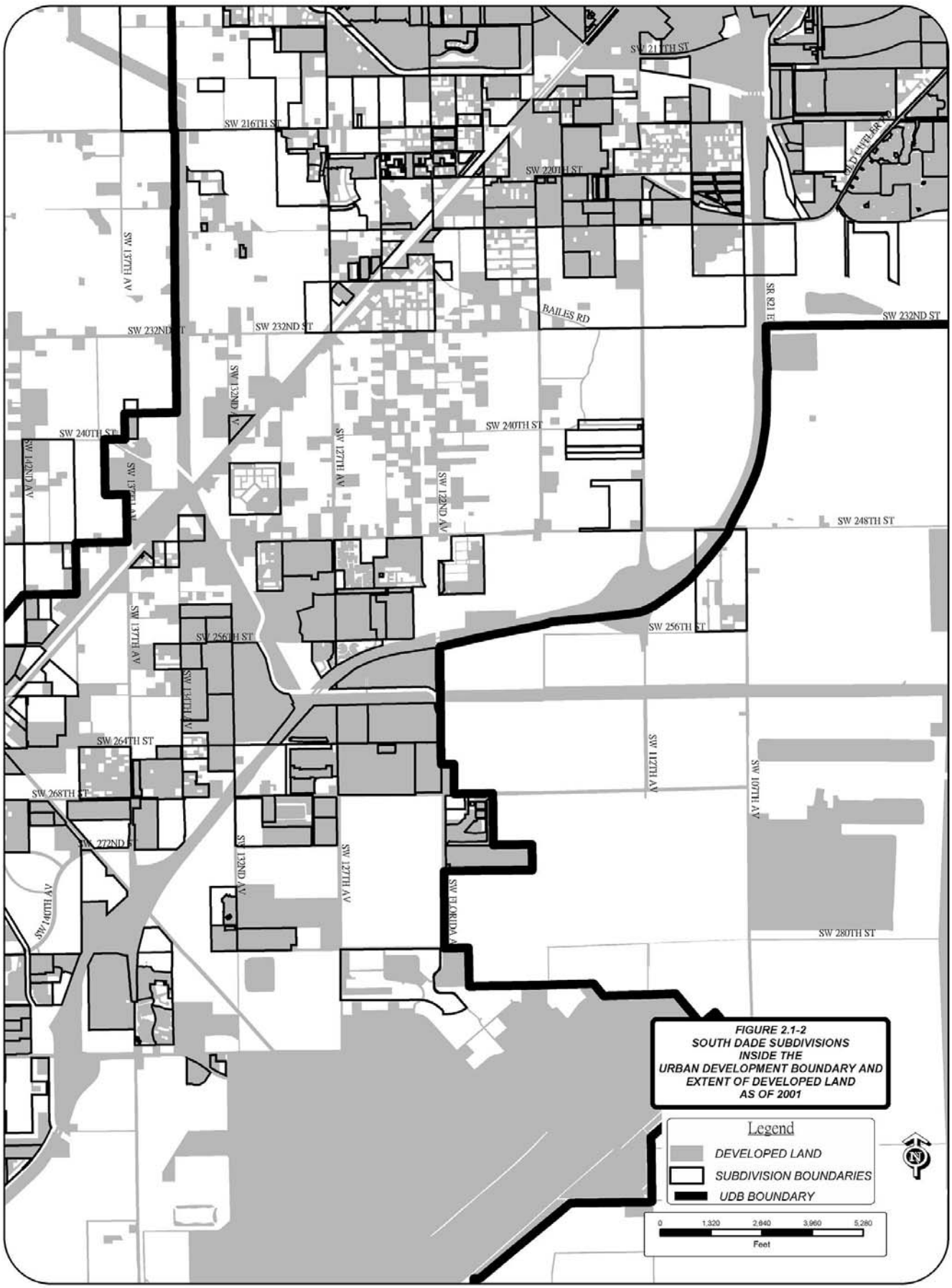
SW 280TH ST
SW 280TH ST
SW 172ND AV
SW 147TH AV
SW 288TH ST
SW 137TH AV
SW 207TH AV


SW 211TH ST
SW 216TH ST
SW 220TH ST
OLD CUTLER RD
SW 137TH AV
SW 232ND ST
BAILES RD
SR 821 E
SW 232ND ST
SW 132ND AV
SW 240TH ST
SW 240TH ST
SW 142ND AV
SW 137TH AV
SW 127TH AV
SW 122ND AV
SW 248TH ST
SW 256TH ST
SW 256TH ST
SW 137TH AV
SW 134TH AV
SW 264TH ST
SW 268TH ST
SW 272ND ST
SW 140TH AV
SW 132ND AV
SW 127TH AV
SW FLORIDA
SW 127TH AV
SW 107TH AV
SW 280TH ST
FIGURE 2.1-2
SOUTH DADE SUBDIVISIONS
INSIDE THE
URBAN DEVELOPMENT BOUNDARY AND
EXTENT OF DEVELOPED LAND
AS OF 2001
Legend
DEVELOPED LAND
SUBDIVISION BOUNDARIES
UDB BOUNDARY
N
0
1,320
2,640
3,960
5,280
Feet

As shown in Table 2.1-1, the total growth in housing has been very minimal for all NSRA's. The growth in housing between 1990 and 2000 is a net of 78 dwelling units for all 9 NRSAs. Five of the 9 NRSAs had a net loss of dwelling units. However, the NRSAs of West Little River, Melrose, South Miami and Leisure City all had growth rates in housing that exceeded 7 percent. South Miami had the greatest growth with a rate of nearly 27 percent.

Table 2.1-1
Housing Units in Neighborhood Revitalization Strategy Areas (NRSAs) in 1990 and 2000

NRSA	Housing Units 1990	Housing Units 2000	Net Change between 1990 and 2000
Coconut Grove	248	144	-104
Goulds	2,391	2,296	--95
Leisure City	1,403	1,553	150
Melrose	1,323	1,418	95
Model City	11,137	10,613	-531
Opa Locka	5,709	5,407)	-302
Perrine	1,421	1,091	-330
South Miami	596	754	158
West Little River	12,873	13,910	1037
Miami-Dade	771,288	852,278	80,990

Source: U.S. Census Bureau, Census 2000, Summary file 3, Miami-Dade County Department of Planning and Zoning

Revitalization efforts are still needed in the NRSAs. All 9 NRSAs have poverty rates for persons that substantially exceed the County's overall rate of 18 percent in both 1990 and 2000 (See Table 2.1-2). The poverty rates for persons have declined in the NRSAs of Coconut Grove, Goulds, Melrose, Model City, Opa-locka and Perrine.

Table 2.1-2
Poverty Rates for Persons in Neighborhood Revitalization Strategy Areas (NRSAs) in 1990 and 2000

Location	Persons in Poverty 1990		2000	
Coconut Grove	202	(32%)	134	(25%)
Goulds	3,544	(47%)	3,112	(43%)
Leisure City	1,483	(34%)	1,820	(35%)
Melrose	1,309	(34%)	1,129	(26%)
Model City	15,131	(49%)	13,708	(48%)
Opa Locka	5,650	(37%)	5,258	(35%)
Perrine	2,448	(55%)	1,801	(54%)
South Miami	768	(38%)	714	(49%)
West Little River	10,511	(26%)	12,765	(30%)
Miami-Dade	341,261	(18%)	396,995	(18%)

Source: U.S. Census Bureau, Census 2000, Summary file 3,
Miami-Dade County Department of Planning and Zoning

Monitoring Measure C. A significant source of funding capital improvements in NRSAs and other eligible areas is the federal CDBG program. According to Table 2.1-3, The Board of County Commissioners in various Action Plans has allocated over $39,641,245.53 in capital improvements for FY 1995 – FY 2002 in CDBG-eligible areas, which are the census block groups where at least 51 percent of the population is classified as low-and-moderate income. This funding has been used for capital improvements such as water and sewer, parks, streets, sidewalks, and community buildings.

Table 2.1-3
Capital Improvements Expenditures in Miami-Dade County from the Community Development Block Grant
FY 1995 – FY 2002

1995	$10,070,246.49
1996	$6,486,413.52
1997	$5,733,245.37
1998	$4,985,287.17
1999	$3,888,357.46
2000	$925,952.00
2001	$2,182,570.52
2002	$5,369,173.00
Total:	$39,641,245.53

Source: Office of Community and Economic Development, April 2003

Another significant source of funding for capital improvements in NRSAs is the Miami-Dade County Public Schools. Since 1995, an estimated total of $134,917,777.00 has been spent by Miami-Dade County Public Schools for facility improvements including renovations, remodeling, and new construction at 42 schools in the NRSAs. Table 2.1-4 shows the capital expenditures by NRSA.

Table 2.1-4
Estimates Value of Public Facility Improvements by Miami-Dade Public Schools in
Neighborhood Revitalization Strategy Areas (NRSAs)
1995 – present

NRSA	
Coconut Grove	$631,449
Goulds	$10,768,778
Leisure City	$9,723,685
Melrose	$2,055,863
Model City	$48,664,659
Opa Locka	$10,331,490
Perrine	$14,505,729
South Miami	$256,190
West Little River	$37,979,934
Total	$ 134,917,777

Source: Miami-Dade County Public Schools, 2003

Other programs in the 1995-2002 period for providing capital improvements in NRSAs include the Quality Neighborhoods Improvement Program (QNIP) and Miami-Dade County Safe Neighborhood Parks Bond Program. The QNIP program was started in 1998 to address infrastructure needs in older, urban neighborhoods and high growth areas. This $143 million capital program includes the construction of new sidewalks and repairs to existing sidewalks, including safe routes to schools; local and major drainage improvements, road resurfacing, and park facility improvements.

Monitoring Measure D. Since the adoption of the EAR-based amendments to the CDMP in 1996, Miami-Dade County has embarked on an aggressive effort to promote improved design of neighborhoods, developments and buildings in the unincorporated area. The following is a summary of most relevant initiatives that have taken place since the last EAR:

1. In 1996 the Miami-Dade Department of Planning and Zoning (DP&Z) conducted an area plan of the Dadeland Regional Activity Center in south-central Miami-Dade County. The *Specific Area Planning Report for Improving Mobility* was published in September 1996 with the purpose of seeking solutions to mobility problems through the revision of land development policies and regulations.

   In June 1998, Miami-Dade County with assistance from an urban design team conducted a "charrette" for the Dadeland area (also known as the Downtown Kendall Charrette). A charrette is a design-intensive community planning effort that brings together all the stakeholders in an area with the purpose of developing their vision for the same area. The results of the Downtown Kendall Charrette are presented in a document titled the *Downtown Kendall Master Plan*. The *Master Plan* made recommendations in the following areas: transportation, open space and land development regulations.

   In December 1999, the Miami-Dade Board of County Commissioners adopted the "Downtown Kendall Urban Center District" as the implementing tool for physical development in the Dadeland area. The new zoning district that seeks to implement the *Downtown Kendall Master Plan* is a fine example of land development regulations that address the intrinsic relationship between land use and transportation with emphasis in good urban design. The new District seeks also to implement the CDMP concept of concentration and intensification of development around centers of activity served by premium mass transit.

2. In December 1996, the Miami-Dade Board of County Commissioners directed the County Manager to establish an Infill Strategy Task Force. The Task Force was directed to examine and make recommendations on opportunities and strategies to promote infill and redevelopment in underdeveloped areas within the County's Urban Development Boundary. In December 1997, the Task Force published its Final Report containing 12 "cornerstone" recommendations. Of these recommendations, there are two that are very relevant to this objective, they are the following:

   Recommendation 4
   Within the Urban Infill Development Area, encourage a balanced mix of well-designed housing types (owner/renter occupied units), sizes and prices for all income levels (market and non-market rate units).

   Recommendation 10
   Promote good design to gain acceptance of higher density, and promote mixed use neighborhoods and projects, including small area planning with a clear objective of empowering the residents, business owners, and all other stakeholders in determining the character and intensity of development in and around their neighborhood.

   Since then, and as shown in this section, the County has engaged in a series of initiatives that will help to implement these recommendations.

3. In February 1999, DP&Z published the *Urban Design Manual*. The purpose of the manual is to illustrate the basic urban design principles that can significantly improve the quality of physical development in unincorporated Miami-Dade County. The manual provides criteria to be used by designers, developers, County staff, Community Councils, and Board of County Commissioners in their development review process.

4. In February 2000, DP&Z initiated a major overhaul of Chapter 33 (land development regulations) of the County Code. This project known as the *zoning code rewrite* seeks among its objectives to: (1) create new/modified districts based on the CDMP and (2) blend in the guidelines from the *Urban Design Manual*. The *zoning code rewrite* is expected to be completed this fall (2003).

5. In October 2000, DP&Z conducted the "Ojus Charrette" for the unincorporated area of Ojus in northeast Miami-Dade County. This charrette, the second for the Department, marked the beginning of a series of planning efforts aimed at addressing, among other things, the physical development needs of small areas, urban corridors and CDMP-designated urban centers. The latter, urban centers are places where people can live, work, shop at a convenient walking distance, while having access to other parts of the County by way of rapid transit. Since the Ojus Charrette, DP&Z has conducted charrettes for the North Central, Model City, and Perrine community development areas; for the Old Cutler Road corridor; and for the Goulds, Naranja, Princeton and Cutler Ridge urban centers.

6. In 2000 the Board of County Commissioners directed DP&Z to study the feasibility of establishing high-density development zones throughout the County. In 2001, DP&Z published the *Residential Density Feasibility Study*. In its recommendations the Study states that instead of looking for new areas to designate for higher density developments, the County should focus on actions and program changes to achieve higher densities in areas already designated in the CDMP. Specific recommendations of the Study, such as expansion of the County's joint development program at Metrorail stations and the securing of resources for area planning programs, are currently being implemented.

7. In 2002 DP&Z established an in-house "urban design studio" as described in the County's approved capital budget. The studio, now known as the Urban Design Center, provides the capability of conducting and managing design-oriented area planning projects and is staffed by individuals trained in architecture and town planning. Since its inception the Center has been involved in the charrette process as well as the drafting of implementing land development regulations. The Center is to implement through its work the following smart growth principles: mix land uses; take advantage of compact building design; create a range of housing opportunities and choices; create walkable neighborhoods; foster distinctive, attractive communities with a strong sense of place; preserve open space, farmland, natural beauty, and critical environmental areas; strengthen and direct development toward existing communities; provide a variety of transportation choices; make development decisions predictable, fair and cost effective; and encourage community and stakeholder collaboration in development decisions.

8. Through 2003, DP&Z has been working on the Naranja Community Urban Center District, the implementing tool for the Naranja Community Urban Center Charrette. The ordinance has been cleared by the Community Councils and the County's Planning Advisory Board and is now scheduled for final approval by the Board of County Commissioners this summer (2003). The proposed District, which will be used as a prototype for all the other urban center districts, has been prepared with due consideration of future population growth; the promotion of a coherent community-scaled built environment, which respects local and regional architecture; the promotion of an integrated and balanced transportation system based on pedestrian, mass transit, bicycle, and automobile use; the adequate provision of water and sewer infrastructure, schools, parks, and other public services and facilities; and for the preservation and enhancement of the natural environment through the protection and replenishment of landscaping of the public areas.

In conclusion, this objective has been achieved based on Measures A (contiguous urban expansion), C (public facility expenditures in low-and–moderate income neighborhoods) and D (promote improved design of neighborhoods). The UDB has been a useful tool in preventing sprawl and encouraging contiguous urban expansion. A substantial amount of funds have been spent on capital improvements in low-and–moderate income neighborhoods. However for Measure B (the revitalization of low-and–moderate income neighborhoods), additional efforts are needed to improve these areas.

The County has been aggressive in addressing Measure D. Since the last EAR, the County has effectively engaged in efforts to control location and configuration of the County's urban growth by emphasizing the areas highlighted by this objective (i.e. concentration and intensification around centers and development of well-designed communities). Towards this end, the County has devoted considerable manpower and resources. Thanks to the Urban Design Manual, charrette master plans and new land development regulations, the County is beginning to experience a series of well-designed communities that are fully responsive to the aims of this objective – i.e. downtown Kendall and new developments in south Miami-Dade. The completion of the zoning code rewrite and the implementation of the charrette master plans will provide additional safeguards that would help to guarantee the establishment of a responsive and efficient urban form for Miami-Dade County.

Policy Relevance. All policies under this objective were reviewed for continued relevance. Recommended objective and policy changes include the following:

Objective 1**.** This objective remains relevant, but its 2015 planning horizon should be extended to 2025.

Policy 1D. This policy should be deleted since the requested report on infill development was completed in 1997.

Policy 1K. This policy should be revised to reflect that the County now participates in the Empowerment Zone Program and no longer participates in the Federal Enterprise Community Program.

Monitoring measures B and C. These measures currently refer to CD areas (NRSAs) as the geographic basis for collecting information. The Office of Community and Economic Development (OCED) no longer keeps project information on a CD area basis. These monitoring measures should be revised.

Objective 2

Decisions regarding the location, extent and intensity of future land use in Miami-Dade County, and urban expansion in particular, will be based upon the physical and financial feasibility of providing, by the year 2005, all urbanized areas with services at levels of service (LOS) which meet or exceed the minimum standards adopted in the Capital Improvements Element.

CDMP Monitoring Measure. The extent of area experiencing conditions below minimum adopted LOS, at LOS, and substantially above minimum LOS will be monitored by the Department of Planning, Development and Regulation and reported in the EAR for each service addressed in the CDMP.

Objective Achievement Analysis. Chapter 163 Part II, Florida Statutes (F.S.), the "Growth Policy Act", requires that transportation (roadways and mass transit), storm water (drainage), potable water, sanitary sewer, solid waste and park and recreation facilities meet or exceed the adopted level of service in (LOS) standards that are established in the comprehensive plan of the local government. Miami-Dade County has standards for each of the above-referenced public facilities and services in the Capital Improvements Element of the CDMP. Miami-Dade County has developed the Concurrency Management Program to insure for developments that public facilities and services meet or exceed the LOS standards that are established in the Plan's Capital Improvement Element and are available when needed for the development, or the development orders or permits are conditioned on the availability of these public facilities and services necessary to serve the proposed development. The term "development order" is defined in Chapter 163.3164, F.S., to include any zoning action, subdivision approval, certification, permit or any other official action of local government.

Transportation (Roadway and Mass Transit)

Policy 1B in the Traffic Circulation Subelement establishes the County's minimum acceptable peak-period operating LOS standards for all State and County roads in Miami-Dade County. Section 2.2.1, Traffic Circulation Subelement, of this report evaluates the progress made in meeting the adopted LOS standards. The adopted LOS standards are summarized in Table 2.2.1-1, "Peak-Period LOS Standard", and Figure 2.2.1-1, "Existing Operating LOS 2002", shows the conditions of the roadway at the time the EAR was prepared.

A total of 645 roadway segments were analyzed. Of these, 44 were found to be operating at LOS F (extremely congested), 26 at LOS E (very congested), 109 at LOS D (congested) and 466 at LOS C (uncongested). Major congestion problems existed in several important travel corridors. To the northwest, conditions on portions of roadway segments in the area between NW 183 Street and Flagler Street and between NW 72 and NW 7 Avenue were extremely congested. To the southwest, conditions on portions of roadway segments in the area between SW 56 and 112 Streets and between SW 137 and SW 27 Avenues were also extremely congested.

Also, the results of the roadway LOS analyses indicate that not all roadway segments in Miami-Dade County are operating at or below the adopted LOS standards. As of January 31, 2003, 44

roadway segments have failed to meet the concurrency LOS. Table 2.2.1-3, Deficient Roadway Segments, identifies all the roadway segments within Miami-Dade County that have concurrency violations. However, the County has and will continue to strive to look for alternate solutions to reduce the use of single occupant vehicles (SOVs) and traffic congestions and encourage the use of transit and ridesharing.

Policy 1A in the Mass Transit Subelement (MTS) establishes the adopted LOS standard for mass transit. The LOS standard requires that all areas within the Urban Development Boundary with a combined resident and work force population of more than 10,000 persons per square mile be provided with minimum peak-hour mass transit service having 60-minute headways and an average route spacing of one mile (provided certain conditions exist).

Section 2.2.2, Mass Transit Subelement, of this report evaluates the progress made in meeting the adopted LOS standard established by Policy 1A. Figure 2.2.2-1, "Year 1999 Combined Population and Employment", of the MTS Section identifies all Traffic Analysis Districts estimated to have a combined population and employment of 10,000 persons per square mile or greater in 1999. And Figure 2.2.2-2, "Mass Transit System Metrorail and Metrobus, As of April 2003", shows the existing 2002 transit routes that maintain the required LOS standard. The analyses performed by Miami-Dade Transit and the information generated and provided in Figures 2.2.2-1 and 2.2.2-2 show that all areas of Miami-Dade County have met or exceeded the adopted LOS standard for mass transit.

Drainage (Stormwater)

Policy 5A in the Conservation, Aquifer Recharge and Drainage Element of the CDMP establishes the County's adopted Stormwater Management (Drainage) LOS standards for both a Flood Protection component and a Water Quality component. The minimum acceptable Flood Protection Level of Service (FPLOS) standards for Miami-Dade County calls for the protection from the degree of flooding that would result for a duration of one day from a ten-year storm, with exceptions in previously developed canal basins, where additional development to this base standard would pose a risk to existing development. The Water Quality component of the standard shall be met when the annual averages for 12 pollutants identified by the National Pollutant Discharge Elimination System do not exceed target criteria within a canal basin or sub-basin, as determined in accordance with procedures established by Miami-Dade County DERM.

Section 2.4, Conservation, Aquifer Recharge and Drainage Element, of this report evaluates the progress made in meeting the adopted Flood Protection LOS standards established in Policy 5A. The County's Stormwater Master Plan incorporates the basin plans for the 12 primary hydrologic basin plans. The Master Plan is approximately 45% complete. Of the basin plans, the northern three basins (C-7, C-8 and C-9) have been completed, the three southern basins (C-1, C-102 and C-2) are approximately 70% complete, and the three major central basins (C-100, C-4 and C-2) are less than 15% complete. The remaining three basins (C-6, C-3 and C-111) are scheduled to begin by 2004 with all basin plans being complete by December 2005. The basin master plans have been instrumental in identifying areas with less than one in ten year flood protection. More details regarding the achievement of Objective 5 and meeting the Flood Protection LOS established in Policy 5A is presented in Section 2.4 of this report.

Water and Sewer

Policy 2A in the Water and Sewer Subelement of the Water, Sewer and Solid Waste Element of the CDMP, establishes the LOS standards for Potable Water and Sanitary Sewer. Section 2.5.1, Water and Sewer Subelement, of this report evaluates the progress made in meeting the adopted Potable Water and Sanitary Sewer LOS standards.

The Water and Sewer LOS standard is defined in Policy 2A of the Water and Sewer Subelement. For potable water, the regional treatment system shall operate with a treated maximum daily capacity that is no less than 102 percent of the maximum daily flow for the preceding year, and an average daily capacity of 102 percent of the average daily system demand for the preceding five years. In addition, water must be delivered to users at a pressure no less than 20 pounds per square inch and no greater than 100 pounds per square inch, with minimum fire flows based upon the varying land uses. Water quality must also meet all federal, State, and County primary standards for potable water, and Countywide storage capacity for finished water must equal no less than 15 percent of the Countywide average daily demand.

The Miami-Dade Water and Sewer Department (WASD) met all of the LOS standards except for meeting the requisite fire flow standard in two isolated areas of the County. These areas were generally within the Opa-Locka area and part of the Okeechobee Road corridor in Northwest Miami-Dade County, from NW 72 Avenue to NW 102 Avenue, as indicated in Figure 2.5.1-3. The Miami-Dade Fire Rescue Department reports that efforts are ongoing to mitigate the problem.

The County's adopted LOS standard for wastewater treatment and disposal requires that the regional wastewater treatment and disposal system operate with a capacity which is two percent above the average daily per capita flow for the preceding five years and a physical capacity of no less than the annual average daily sewer flow. The wastewater effluent must also meet all applicable federal, State, and County standards and all treatment plants must maintain the capacity to treat peak flows without overflow. It must be noted here, similarly to potable water, that requiring treatment for 102 percent of sewage system demand should be systemwide and not measured against per capita demand and the LOS should be changed. LOS capacity standards have been met throughout the period.

Solid Waste

LOS for Solid Waste is stated in Policy 2A of the Solid Waste Management Subelement, which obligates the County Solid Waste Management System to collectively maintain disposal capacity sufficient to accommodate waste flows committed to the System through long-term interlocal agreements or contracts with municipalities and private waste haulers, and anticipated non-committed waste flows, for at least five years. Section 2.5.2, Solid Waste Subelement, of this report evaluates the progress made in meeting the adopted Solid Waste LOS standards. The County has capacity through the five years (2003-2008) specified in Policy 2A, and capacity is adequate to meet LOS until 2011, three years beyond the minimum standard.

Recreational Open Space

Policy 2A of the Recreation and Open Space Element defines Miami-Dade County's minimum LOS standard for the provision of recreation open space. Among the standards, the County is obligated to provide 2.75 acres of local recreation open space per 1,000 permanent unincorporated area residents, of 5 acres or larger within a 3-1/2 mile distance from residential development. Level of Service is calculated and determined for each of the three Park Benefit Districts (PBDs) covering Miami-Dade County and the unincorporated population included within the PBDs. Section 2.6, Recreation and Open Space Element, of this report evaluates the progress made in meeting the adopted Recreational Open Space LOS standards. The LOS standards have been met in all three PBDs.

In conclusion, the objective has been achieved in the County for these public services and facilities except for roadways and potable water supply. Even for these two public services most areas in the County meet or exceed the LOS standards. However, limited areas of the County are impacted roadway congestion in excess of the standards and by water lines without sufficient flow to adequately fight fires.

Policy Relevance. All policies under this objective were reviewed for continued relevance and should be retained Objective 2 has not yet been achieved but should be retained. The target date should be changed from 2005 to 2010.

Objective 3

Upon the adoption of the CDMP, the location, design and management practices of development and redevelopment in Miami-Dade County shall ensure the protection of natural resources and systems by recognizing, and sensitively responding to constraints posed by soil conditions, topography, water table level, vegetation type, wildlife habitat, and hurricane and other flood hazards, and by reflecting the management policies contained in resource planning and management plans prepared pursuant to Chapter 380, Florida Statutes, and approved by the Governor and Cabinet.

CDMP Monitoring Measure. Number of dwelling units and other structures approved which are inconsistent with Dade County's East Everglades Zoning Overlay regulation (Chapter 33-B, Code of Metro-Dade County), and any CDMP amendments that would increase the allowable number of dwelling units or nonresidential floor area on coastal barrier islands. Any such approvals shall be logged by the Department of Planning, Development and Regulation *(now the Department of Planning and Zoning)* and reported in the EAR.

Objective Achievement Analysis. The East Everglades zoning overlay district covers 242 square miles; however, all residential development activity has occurred in an area known as the 8.5 Square Mile. According to text in the Land Use Element related to Open Land Subarea 4 (East Everglades Residential Areas), construction of a single-family residence in this area is allowed on a 40-acre parcel. A home on 20 acres is allowed if ancillary to an existing agricultural operation. Additionally, a single-family residence is allowed on five acres if

drainage facilities become available to protect this area from a one-in-ten year flood event in keeping with the adopted East Everglades zoning overlay regulation.

The Department of Planning and Zoning conducted a comparison of existing structures for the 8.5 Square Mile in 1994 and 2000 using Land Use files. In 1994 the estimated number of residential structures in the 8.5 Square Mile was 335. In 2000 this number was calculated to be 333, an insignificant change from 1994. County permitting records show that permits have been issued only for uses consistent with the County policy. Thus, permitting files data indicates that the adopted monitoring measure for the objective has been achieved. Unfortunately, this data does not take into consideration the illegal conversion of structures and may not be representative of all residential units in this area.

The 1995 EAR indicated that many structures in the 8.5 Square Mile had been illegally converted from agricultural to residential and cited a lack of enforcement in this area as a problem. The EAR document indicated that the Department of Environmental Resource Management (DERM) conducts periodic surveys to determine the number of residential and agricultural structures in this area. According to DERM, the last inventory report on the 8.5 square mile area was completed in 1999. Table 2.1-5 compares data from surveys conducted in 1994 and 1999 with regards to structures in the 8.5 Square Mile.

Table 2.1-5
East Everglades Zoning Overlay District
Comparison of Existing Structures and Acreage

	Year	
Category	1994	1999
Total Acres	6,078	NA
Residential Acres	748	NA
Agricultural Acres	1,653	2,367
Vacant Acres	2,861	NA
Government Owned Acres	632	NA
Commercial Acres	18	NA
Number of Residential Structures	356	321
Number of Trailers	1	193
Number of Agricultural Structures	455	525
Other Structures	106	899

Source: Miami-Dade Department of Environmental Resources Management, Wetlands & Forest Resources Section, 2003
NA Information not available

As indicated by this table, residential structures decreased from 357 to 321 units; however, 193 trailers were observed, mostly camping trailers, used for mainly residential and agricultural uses. It is unclear how many of these units are being utilized as primary residential structures. Land Use file data indicates a permitted total of only 335 residential units through 2000, which does differentiate between a trailer and residential structure as the primary residence. Additionally, in 1999, the South Florida Water Management District (SFWMD) reportedly began demolition of several structures due to condemnation proceedings for drainage and restoration purposes. This could account for the reduction in units between the Land Use file and the DERM survey and could also be a partial reason for the increase in trailer usage in the agricultural area.

This table also indicates that there has been a significant increase in agricultural structures and "other structures". Many DERM inspection reports state that agricultural structures have been converted to illegal residential units, a problem which was also noted in the 1995 EAR. The problem of illegal uses (trailers) and illegal conversions should be addressed with stronger enforcement in the area.

No surveys have been conducted through either the Land Use file or DERM since 2000 or 1999, respectively. Given the condemnations and demolitions being conducted by the SFWMD, it is unclear how many illegal structures currently exist in this area. Updated figures for both the Land Use file and DERM survey should be collected to ascertain the nature of the illegal use/ illegal conversion problem. Additionally, procedures should be implemented to deal with the problem of illegal conversions in this area. It should be noted that should the SFWMD and Army Corp of Engineers implement flood protection measures, many illegal residential structures (greater than 1 unit per 20 acres) could be legalized from a land use perspective. However, these measures would not legalize these units from a building code perspective.

The second portion of the monitoring measure involves the number of CDMP amendments filed for properties in the Coastal High Hazard Area (CHHA). Only one residential community, Fisher Island, lies in unincorporated Miami-Dade County; the remaining communities are within incorporated areas. A review of the CDMP Amendment cycles between 1995 and 2002 indicated a total of six applications, all in the 1995/1996 CDMP Amendment Cycle had been filed for properties within the CHHA. As indicated in Table 2.1-6 the six amendment applications represented a total of 51 acres, all of which were approved. The North Bay Village and Miami Beach applications each converted Medium-High residential acreage (60 dwelling units per acre) to Office and Business use. The Fisher Island application was property owned by the University of Miami and sold to a developer for medium-high density residential development. This portion of the island was, in 1988, under the control of Miami Beach, which allowed the land use designation change. All CDMP Amendment changes made in 1995 to properties in the CHHA were recommended to maintain consistency between the County's Land Use Map and those of the municipalities. Since none of the original land use changes were made by Miami-Dade County, this portion of the objective has been achieved.

Table 2.1-6
CDMP Amendment Changes in the Coastal High Hazard Area (CHHA), 1995-2002

Location	Requested Change		Acres
	From	To	
Fisher Island frontage on Government Cut	Institutional and Public Facility	Residential low med. Density (13 Du/Ac)	8
North Bay Village (North frontage to North Bay Causeway)	Residential Med-High Density (60 Du/AC)	Business and Office	5
Miami Beach (South of Normandy Dr. from Harding to Indian Creek)	Residential Med-High Density (60 Du/AC)	Business and Office	5
Miami Beach (Dade Blvd. to 20 St. from Bayshore Golf Course to West Ave.)	Residential Med-High Density (60 Du/AC)	Business and Office	15
Miami Beach (South of 12 St. from Washington Ave. to Pennsylvania Ave.)	Residential Med-High Density (60 Du/AC)	Business and Office	10
Miami Beach (South frontage of 5 St. from Alton Rd. to Washington Ave.)	Residential Med-High Density (60 Du/AC)	Business and Office	8
Total			51

Source: Miami-Dade Department of Planning and Zoning, 2003

Policy Relevance. All policies under this objective were reviewed for continued relevance. Recommended objective and policy changes include the following:

Objective 3**.** This objective needs rewording to reflect CERP and other current environmental programs.

Policy 3A. Revise the text to reflect the full name of the "Conservation, Aquifer Recharge and Drainage Element."

Policy 3C. This policy needs rewording to reflect CERP, other current environmental programs, Chapter 33 B of the Miami-Dade Code, and, if adopted, the provisions of the Zoning Code Rewrite.

Policy 3E. Modifications to this policy include:

- Revise title of the plan from "South Dade Land Use and Water Management Plan" to "South Miami-Dade Watershed Plan."

- Update dates and committee titles in text.

Objective 3 Monitoring Measure - The monitoring measure should be expanded to look at development in environmentally sensitive areas (i.e. lakebelt) other than just the 8.5 Square Mile.

Objective 4

Dade County shall, by the year 2005, reduce the number of land uses which are inconsistent with the uses designated on the LUP map and interpretive text, or with the character of the surrounding community.

Objective 5

Upon the adoption of this plan, all public and private activities regarding the use, development and redevelopment of land and the provision of urban services and infrastructure shall be consistent with the goal, objectives and policies of this Element, with the adopted Population Estimates and Projections, and with the future uses provided by the adopted Land Use Plan (LUP) map and accompanying text titled "Interpretation of the Land Use Plan Map", as balanced with the Goals, Objectives and Policies of all Elements of the Comprehensive Plan.

Monitoring Measures 4 and 5 The number of rezoning applications filed by the Department of Planning and Zoning, and approved by the Board of County Commissioners to bring pre-existing zoning into closer uniformity with the LUP map shall be logged by the Department of Planning and Zoning and reported in each EAR.

Achievement Analysis of Objectives In the 1995 EAR Report, there were eleven applications filed by the Director of the Department of Planning and Zoning. Since 1995, there have been five applications filed by the Director. Table 2.1-7 summarizes chronologically the applications filed by the Director between the years 1995 and 2002. The applications are listed in the table indicating the zoning before and after the applications were filed. This objective was achieved.

Table 2.1-7
Zoning Changes Initiated for CDMP Consistency in Miami-Dade County between 1995 and 2002

Date	Zoning Change	Location	Acreage
1/5/96	RU-4A to RU-TH	South side of Coral Reef Drive, between Florida Turnpike Extension on the north and SW 117 Avenue on the west	4.89
5/9/96	RU-4 to RU-TH	Northwest side of Bethune Drive between Jefferson Street and SW 116 Avenue	.98
6/20/96	RU-4 to RU-TH	South side of Louis Street between Jefferson Street and SW 116 Avenue	3.61
12/19/96	RU-2 to RU-1	SW 58 and SW 59 Avenues	28.1
12/20/01	GU, RU-1, RU-3M, and RU-4L to TND	Between SW 152 and SW 139 Avenues between SW 270 Street and SW 280 Street	201.8

Source: Miami-Dade Department of Planning and Zoning, 2003

Policy Relevance. All policies under this objective were reviewed for continued relevance. The recommended revision is the following:

Policy 4F. Replace the phrase "South Florida Building Code" with "Florida Building Code."

Objective 6

Dade County shall protect, preserve, ensure the proper management, and promote public awareness of historical, architectural and archaeologically significant sites and districts in Dade County, and shall seek the addition of approximately 30 new listings to the National Register by 2000, and increase the number of locally designated historical and archeological sites, districts and zones by 50 percent by the year 2005.

Monitoring Measure. The number of new listings on the National Register, and the number of locally designated archaeological sites, districts and zones shall be compiled by OCED and shall be reported by the Department of Planning and Zoning in the EAR.

Objective Achievement Analysis. The Miami-Dade County Historic Preservation Ordinance was adopted in 1981. The ordinance created the Historic Preservation Board and empowered this board to designate historic and archaeological sites, historic districts and archaeological zones; and to review and regulate through Certificates to Dig or Certificates of Appropriateness alterations or proposals that impact designated properties in unincorporated Miami-Dade County and in municipalities without historic preservation programs. The County also has a property tax exemption program for renovating, restoring and rehabilitating historic properties that can be granted by the Board of Commissioners. As of February 2003, Miami-Dade County had 739 archaeological and historical sites designated either by the County's Historic Preservation Board or municipal boards, a 91.9% increase in sites from 1995. A total of 155 places in Miami-Dade County, an 11.5% increase from 1995, are registered on the National Register for Historic Places including some that are also locally designated. Properties listed on the National Register may be eligible for federal grants or tax credits but are not protected from demolition unless federal funding is used or federal licenses are required. Municipalities with their own historic preservation programs including Miami, Miami Beach, Hialeah, Coral Gables, South Miami, Opa-Locka, Homestead, Miami Springs and Miami Shores accounted for an increase of 327 historic places representing a 124.3% increase in the number of places designated since 1995. The growth in historic places is summarized in Table 2.1-8. The overall increase in each category indicates that the objective has been achieved.

Policy Relevance. All policies under this objective were reviewed for continued relevance. The following revisions are proposed.

Objective 6. This objective should be reworded to be directive in nature and not be year specific.

Objective 6 Monitoring Measure. The monitoring measure states that data on historical and archaeological sites will be compiled by OCED; however, the Office of Historic Preservation is no longer under OCED. Therefore this monitoring measure should be reworded to reflect the Office of Historic Preservation. In addition, the text should be revised to include historical as well as archaeological sites, districts and zones. This revision will reflect the intent of the objective.

Policies 6H and 6L should have the name Historic Preservation Division modified to Office of Historic Preservation.

Table 2.1-8
Growth in the Designation of Historic Places
In Miami-Dade County, Florida 1995-2002

Designated Places	January 1995	January 2003	Percent Change
National Register Listings [1]			
National Landmarks	1	2	100%
Historic Sites	132	143	9.1%
Historic Districts	4	5	25%
Archaeological Sites	1	2	100%
Archaeological Districts	1	3	200%
Total National Listings	**139**	**155**	**11.5%**
Miami-Dade County [2]			
Historic Sites	89	108	21.4%
Historic Districts	4	7	75%
Archaeological Sites	14	16	14.3%
Archaeological Zones	15	18	20%
Total County Listings	**122**	**149**	**22.1%**
Municipal [3]			
Historic Sites	242	555	123.9%
Historic Districts	18	29	61.1%
Historic Thematic Groupings	1	1	0%
Archaeological Sites	1	4	300%
Archaeological Zones	1	1	0%
Total Municipal Listings	**263**	**590**	**124.3%**
Total County and Municipal Listings	**385**	**739**	**91.9%**

[1] Source – National Register of Historic Places, 2003
[2] Source – Miami-Dade County Office of Historic Preservation, 2003
[3] Source – Miami-Dade County Department of Planning and Zoning, 2003

Objective 7

By 2003, Miami-Dade County shall require all new development and redevelopment in existing and planned transit corridors to be planned and designed to promote pedestrianism and transit use.

CDMP Monitoring Measure. This objective and policies were added to the CDMP in 1999 as part of a settlement agreement between Miami-Dade County and the Department of Community Affairs. No monitoring measure has been established for this objective.

Objective Achievement Analysis. Since the adoption of this objective the County has taken several steps to ensure that development along transit corridors, and particularly around transit stations, promote a mix of use, pedestrian traffic and transit use. The CDMP designation of urban centers has helped considerably towards this end. (CDMP's urban centers are places where people can live, work, shop, at a convenient walking distance, while having access to other parts of the County by way of rapid transit.)

In 1998, the County began an aggressive program to address land uses and transportation around Metrorail and South Dade Busway stations. More precisely, in June 1998, the County with assistance from an urban design team conducted a "charrette" for the area around the two Metrorail stations in the metropolitan urban center of Dadeland (also known as the Downtown

Kendall Charrette). A charrette is a design-intensive community planning effort that brings together all the stakeholders in an area with the purpose of developing their vision for the same area. The results of the Downtown Kendall Charrette are presented in a document titled the *Downtown Kendall Master Plan*. The *Master Plan* made recommendations in the following areas: transportation, open space and land development regulations.

In December 1999, the Miami-Dade Board of County Commissioners adopted the "Downtown Kendall Urban Center District" as the implementing tool for physical development in the Dadeland area. The new zoning district that seeks to implement the *Downtown Kendall Master Plan* is a fine example of land development regulations that address the intrinsic relationship between land use and transportation with emphasis on good urban design. The new pedestrian-friendly District seeks also to implement the CDMP concept of concentration and intensification of development around centers of activity served by premium mass transit.

In 1999, the County conducted a charrette for the planned Goulds community urban center (SW 216 Street and US 1). This effort was the first of a series that addresses development around the existing and proposed South Miami-Dade Busway stations and in designated urban centers. The Goulds effort has been followed by charrettes for areas around the Busway stations/urban centers of Naranja (SW 264 Street and US 1), Princeton (SW 248 and US 1), Perrine (SW 172 and US 1), and Cutler Ridge (SW 211 Street and US 1). The balance of the Busway stations will be addressed in the coming years. Each of these charrettes has produced a citizen's master plan that is built around the principle of urban design that promotes pedestrian traffic and transit use.

The County is currently going through the hearing process to adopt the first of the ordinances implementing the community urban centers' plans. The "Naranja Community Urban Center District" seeks to:

A. Coordinate the development intensity within the Community Urban Center (CUC) by the proximity to mass transit and by creating Core, Center and Edge Sub-Districts to properly allocate the various development intensities within the CUC;

B. Organize an interconnected network of tree-lined streets and sidewalks to improve pedestrian access to transit, jobs, and shopping; and

C. Create public open space with specific square, green and/or plaza locations, and by shaping the way buildings front onto open space and streets.

The Naranja ordinance will be adopted by the end of this summer (2003). Ordinances implementing the other charrettes will immediately follow starting with Goulds'.

The County has also embarked on the idea of promoting affordable housing development opportunities within the proximity of areas served by mass transit. Towards this end, Miami Dade Transit, through its joint development program, has been including in its request for proposals the requirement for the provision of affordable housing. The following proposed joint developments have affordable housing components:

- Dadeland North Metrorail Station - A lease was signed for Phase I, the 320,000 sq. ft. retail component of the joint development opened in October 1996 and an "out parcel" consisting of 48 apartments were completed in January 2000. Phases II and III include the construction of a 25-story, 218-unit apartment building and a 15-story with 8,570 sq. ft. of retail and a 15-story, 117-unit apartment tower with 7,000 sq. ft. retail space;
- Coconut Grove Metrorail Station - Development will consist of a 19-story mixed-use transit center with 23,000 sq. ft. of ground retail, 220 residential units and a 611-space parking garage; a 19-story office building with 11,000 sq. ft. of ground floor retail, 157,200 sq. ft. office space, a hotel and additional 500-space parking garage;
- The Santa Clara Apartments. This affordable rental housing development to be located at the Santa Clara Metrorail Station, N.W. 12th Avenue between N.W. 20th and 21st Streets, consists of a nine-story, 208-unit affordable rental apartment development, including one level of parking. Construction began in September 2002. An additional 17-story, 200-unit building, including five levels of parking, is proposed for construction in 2003; and
- Allapattah Garden Apartments. This proposed affordable, rental housing complex to be located at the Allapattah Metrorail Station, N.W. 36th Street and N.W. 12th Avenue, consists of six garden-style, three-story buildings totaling 128 two- and three-bedroom units. Construction began in October 2002.

In conclusion, this objective has been achieved. Since 1999, the County has effectively engaged in planning efforts that guide new development and redevelopment in existing and planned transit corridors to promote pedestrian circulation and transit use. Towards this end, the County has devoted considerable manpower and resources. Thanks to charrette master plans and new land development regulations, the County is beginning to experience a series of well-designed, pedestrian-friendly communities around major transit stops – i.e. downtown Kendall. The County is and will continue to seek implementation of all charrette master plans as well as Miami-Dade Transit's joint development program.

Policy Relevance. The objective and all policies continue to be relevant; however, the following revisions are proposed.

Objective 7. The target date of 2003 should be removed.

Policy 7F. The policy should be revised. The target dates for planning the areas around rail stations should be concurrent with the People's Transportation Plan.

Objective 7 Monitoring Measure. A new monitoring measure for Objective 7 is needed since this objective was added without a monitoring measure in 1999. The success or failure of programs, which promote pedestrianism and transit use, should be measured.

Objective 8

Miami-Dade County shall maintain a process for periodic amendment to the Land Use Plan map, consistent with the adopted Goals, Objectives and policies of this Plan, which will provide that the Land Use Map accommodates projected countywide growth.

CDMP Monitoring Measure. The supply and consumption rates of residential, commercial and industrial land shall be analyzed by the Department of Planning, Development and Regulation *(now the Department of Planning and Zoning)* for compliance with Objective 8 and findings will be reported in each EAR.

Objective Achievement Analysis. The availability of industrial, commercial and residential land in Miami-Dade County is addressed in Part One of Section 1.1, Community-wide Assessment. Miami-Dade County has maintained a process for periodic amendments to the Land Use Plan map. Appendix 1.1-A contains a list of Land Use Plan map amendments adopted during the numerous amendment cycles, which occurred between 1995 and 2002. During the amendment process, the supply and consumption rates of residential, commercial, and industrial land is analyzed to determine the availability of vacant land for development. The Community-wide Assessment contains detailed descriptions of current analyses and methodologies. Miami-Dade County updates its land supply/demand estimates and projections roughly every two years. Unquestionably, Miami-Dade County is meeting this objective to maintain a Plan amendment process, which accommodates urban expansion at projected rates.

Policy Relevance. The following revisions are proposed.

Policy 8D. This policy should be deleted. The farmland retention study requested by this policy will be completed in 2003.

Policy 8H. This policy needs rewording to reflect CERP and other current environmental programs.

Objective 9

Miami-Dade County shall continue to maintain, update and enhance the Code of Miami-Dade County, administrative regulations and procedures, and special area planning program to ensure that future land use and development in Miami-Dade County is consistent with the CDMP, and to promote better planned neighborhoods and communities and well designed buildings.

Monitoring Measure 9. The number of significant regulatory revisions made, consistent with CDMP, will be annually logged by the Department of Planning Development and Regulation and reported in each EAR.

Objective Achievement Analysis The Department of Planning and Zoning has maintained logs of ordinances in accordance with the requirements of Land Use Objective 8. The records that are maintained by the Legal Advisor Section identify a total of 86 regulatory revisions during the 1995-2002 period. These changes were primarily made to the Zoning Code including a new

zoning district, Downtown Kendall Urban Center. The other revisions were related to the task force on urban economic revitalization, municipal boundary changes, lake excavations, impact fees, landscaping regulations, annual community image plan and Community Councils.

Policy Relevance. All policies under this objective were reviewed for continued relevance. The following revisions are proposed.

Policy 9F. This policy is being implemented by the preparation of individual ordinances for Metropolitan and Community Urban Centers such as the ordinance for downtown Kendall. Thus, the requirement for a single adoption date for the regulations is no longer applicable and should be removed.

Policy 9J. This policy should be deleted. The home office provisions in the zoning code have addressed the recommendations of this policy for home occupations.

Policy 9H. This policy on neighborhood business node is addressed in the Draft Zoning Code Rewrite. This policy should be deleted if the Draft Zoning Code Rewrite is adopted prior to February 25, 2004.

Policy 9I. This policy on accessory apartments is addressed in the Draft Zoning Code Rewrite. This policy should be deleted if the Draft Zoning Code Rewrite is adopted prior to February 25, 2004.

Policy 9K. The policy should be revised to include planning for Urban Centers, corridors and sectors.

Policy 9L. The County has established a design studio to facilitate urban design efforts in the area-planning program and has a zoning re-write project underway that is incorporating urban design provisions. The target date of 2000 should be revised to 2005.

Policy 9M. This policy should be deleted since the urban design manual required by the policy has been produced.

Policy 9N. The current zoning re-write project is addressing urban design considerations in the Zoning Code; however, the revision of the Subdivision Regulations has not been initiated. This policy needs to be reworded to have the Public Works Department review and update the Subdivision Regulations for urban design purposes.

Policy 9Q. This policy should be deleted since its purpose of limiting the placement of private schools near the UDB was accomplished with the passage of Ordinance No. 02-46.

Objective 10

Energy efficient development shall be accomplished through metropolitan land use patterns, site planning, landscaping, building design, and development of multimodal transportation systems.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

A Revisions to the South Florida Building Code, Metro-Dade Zoning Code, and other County development regulations, which encourage, support, or require energy conservation will be compiled annually by the Department of Planning, Development and Regulation and reported in each EAR.

B Average electrical power consumption per capita and per residential unit will be compared to historical rates.

C. Ridership rates per 1,000 adult population on mass transit (Metrorail, Metromover, and MDTA buses) will be compared to historical rates on an annual basis. Ridership data is monitored and evaluated by the Metro-Dade Transit Agency

Objective Achievement Analysis. The following discussion analyses the achievement of each of the individual monitoring measures.

Measure A. - As of March 2002, the South Florida Building Code (SFBC) was replaced with the Florida Building Code. Therefore revisions to the SFBC were not researched for updates or energy revisions. The Florida Building Code states that all new construction should comply with the requirements of the Florida Energy Efficiency Code for Building Construction, which is updated biennially to incorporate evolving technology. This code cannot be revised on a local level and therefore local changes will not be reviewed for the Building Code. Additionally, no specific changes to Chapter 33, Code of Miami-Dade County (Zoning Code) were made in reference to energy conservation. Based upon information contained in the 1995 EAR report and policies adopted into the CDMP, an Urban Design Manual was completed by the Department of Planning and Zoning in 1999. This document is used by the Department of Planning and Zoning as a basis for site plan reviews; however, this manual has not been officially adopted by the Board of County Commissioners. The Urban Design Manual is instrumental in bringing new urbanism to the forefront in the County and as such promotes energy efficiency and conservation through setbacks, building orientation etc.

In March 1997, the County accepted the concept of an Energy Conservation Performance Program to increase the energy efficiency of the County buildings. In 1998, the County let contracts for approximately $60 million to perform energy efficiency audits and equipment retrofitting of 300 County buildings; the costs to be reimbursed through guaranteed energy savings.

Additionally, the County is researching the concept of Green Buildings. Miami-Dade County's greenhouse gas emissions increased in the1988-1999 period 20.2%, while the County's population increased 16.4%. The increase in greenhouse gas emissions is mainly due to the growth in electrical usage. This growth is attributed to the proliferation of appliances such as air-conditioning, computers, pool pumps and faxes, an increase on the average size of homes, the growth of the county towards the west (the area with hotter daytime temperatures during summer) and an increase in gas consumption due to the advent of SUV's. A policy related to

creation of buildings that maximizes energy and reduces electrical usage has been requested by DERM for inclusion into the CDMP.

The actions undertaken by Miami-Dade County indicate that energy conservation is important to efficient operations. This commitment to energy conservation indicates that this portion of the objective has been achieved.

Measure B. - Table 2.1-9 summarizes the average annual residential electrical consumption in Miami-Dade County for the period between 1995 and 2002 and historical rates as required by Monitoring Measure B.

Table 2.1-9
Consumption of Electricity in Dade County
(FPL's Southern Division)

	Electric Consumption		Customers		
Year	Annual Kilowatt Hours (Thousands)	Annual Residential Consumption (Thousands kwh)	Total Electric Customers *	Residential Customers*	Average Annual Residential Consumption (kwh)
1988	17,982,703	8,209,551	763,946	672,427	12,209
1989	19,031,696	8,775,986	782,932	688,980	12,738
1990	19,307,998	8,932,466	798,553	702,675	12,712
1991	19,837,632	9,278,295	811,029	713,447	13,005
1992	19,101,001	8,864,200	818,686	719,508	11,486
1993	20,208,415	9,488,550	825,013	724,265	13,101
1994	21,225,179	10,069,271	835,834	734,158	13,715
1995	21,544,095	10,259,932	845,536	742,492	13,818
1996	21,555,422	10,270,270	855,192	751,042	13,675
1997	22,467,341	10,573,683	863,463	758,058	13,948
1998	23,528,845	11,284,401	871,614	765,393	14,743
1999	23,362,413	10,890,308	882,428	775,966	14,035
2000	23,951,899	11,234,637	896,736	788,839	14,242
2001	24,328,587	11,411,103	908,597	798,815	14,285
2002	25,512,650	12,122,334	920,563	809,506	14,975

Source: Florida Power and Light, 2003
* Figures based on annual average and not just taken at end of year.

Based on the above table, the average consumption per residential customer has increased steadily since 1995, a trend which was noted between 1988 and 1995. This trend indicates that additional energy conservation is necessary for the County and that the objective has not been fully achieved. Creation of green buildings, as discussed above, should lower these trends.

Measure C – Table 2.1-10 summarizes the ridership rates on mass transit for Miami-Dade County.

Table 2.1-10
Miami-Dade Mass Transit
Ridership Rates Per 1000 Population

Year	Ridership per Category				County Population	Ridership Per 1000 Persons
	Metrobus	Metrorail	Metromover	Total		
1995 -1996	62,257,868	14,204,030	4,325,632	80,787,530	2,084,205	38,762
1996 - 1997	60,579,583	14,386,185	3,962,302	78,928,070	2,124,885	37,145
1997 - 1998	61,925,029	14,019,934	4,118,978	80,063,941	2,157,208	37,115
1998 - 1999	62,269,585	13,482,522	4,052,881	79,804,968	2,189,719	36,445
1999 - 2000	63,827,287	13,604,528	4,052,129	81,483,944	2,221,630	36,678
2000 - 2001	65,821,028	14,080,200	4,230,225	84,131,473	2,253,485	37,334
2001 - 2002	65,413,670	13,735,277	4,856,363	84,005,310	2,283,319	36,790
2002 - 2003	63,369,445	13,753,595	4,768,386	81,891,426	2,313,047	35,404

Source: Miami-Dade Transit Authority, 2003

Based on the above data, it appears there has been a slight upward trend in total ridership during the period. Total ridership has increased between 1995 and 2000 by only 1.3%; however, the population of the County during this same timeframe has increased by approximately 9.9%. When compared to the increase in population, the trend per 1000 persons has declined by approximately 9.4%. In November 2002 a ½ cent transportation sales tax was approved by the citizens of Miami Dade County. This increase will be utilized to improve the scheduling of the transit system, which should result in an increase in ridership over the next several years. A detailed analysis has been provided in the Mass Transit Element with reference to the ridership rates and problems and opportunities associated with efforts to increase transit ridership countywide.

Policy Relevance. All policies under this objective were reviewed for continued relevance. The following objective and policy revisions are proposed.

Objective 10 Monitoring Measure. – Measure A of the monitoring measure should no longer refer to the South Florida Building Code, since this code is no longer relevant.

Policy 10B. This policy has not been achieved. The target date of 2000 should be revised to 2005.

New Policy. A new policy is needed that would help improve energy efficiency in the County by recommending the use of Green Building Standards.

2.2 TRANSPORTATION ELEMENT

The Transportation Element became an element of the Miami-Dade County Comprehensive Development Master Plan (CDMP) on October 10, 1996 as a result of the 1995 Evaluation and Appraisal Report (EAR), new requirements of State planning law and changes needed to update the CDMP. The purpose of the Transportation Element is to plan for an integrated multimodal transportation system that provides for the circulation of motorized and non-motorized traffic in Miami-Dade County, and to provide a comprehensive approach to transportation system needs by addressing all modes of transportation – traffic circulation, mass transit, aviation and ports. The Transportation Element contains an introductory Multimodal Section and five subelements: Traffic Circulation, Mass Transit, Aviation, Port of Miami River and Port of Miami Master Plan.

Shortly after the 1995 EAR-based amendments were adopted by the Board of County Commissioners (BCC), the Florida Department of Community Affairs (DCA) issued a notice finding the updated CDMP to be in compliance with Florida comprehensive planning laws, with the exception of Transportation Element which was found to be not in compliance. Reasons cited by DCA included inadequate demonstration that the various modes of transportation were sufficiently integrated, and inadequate coordination between the land use plan and transportation plan. During the ensuing period, County staff pursued settlement of this matter. On October 1, 1998, DCA officials reported to the County that adoption of CDMP amendments in substantially the form approved by DCA would be acceptable to the department to settle the matter. The resulting settlement agreement was approved by the County Commission on February 2, 1999. On April 13, 1999, the County Commission adopted Ordinance No. 99-42 providing disposition of compliance amendments to the CDMP. The compliance amendments committed the County to 1) cooperate with, and participate in initiatives undertaking by the Florida Department of Transportation (FDOT) or the statewide MPO Advisory Committee to enhance intermodal aspects of transportation plans and planning method, and to utilize such enhanced methods during the next major update of the County's Long Range Transportation Plan (LRTP), expected to occur in 2000/2001; 2) require transit-supportive development intensities and design in planned transit-served areas to complement the guidelines for development of planned urban centers; and 3) in future CDMP projections of level-of-service and administration of the Concurrency Management Program, assume existence of the capacity only of planned transportation facilities that are contained in the "Cost-feasible" component of the MPO's LRTP. As a result of the settlement agreement, the introductory Multimodal Section of the Transportation Element was amended to replace existing Objective 1 with a substantially revised objective and revised policies under this objective; moved existing Traffic Circulation Objective 7 to this section to become Multimodal Objective 2 and added new policies and revised the existing policies under this objective; and added a new Multimodal Objective 3 and associated policies.

All map series within the Subelements will be updated.

Objective 1

Miami-Dade County will provide an integrated multimodal transportation system for the circulation of motorized and non-motorized traffic by enhancing the Comprehensive

Development Master Plan and its transportation plans and implementing programs to provide competitive surface transportation mode choice, local surface mode connections at strategic locations, and modal linkages between the airport, seaport, rail and other inter-city and local transportation facilities. These plans and programs shall seek to ensure that, among other objectives, between 1996 and 2002 Miami-Dade Transit Agency boardings will increase at the rate equal to or greater than the rate of resident population growth during this period.

CDMP Monitoring Measures. The following monitoring measures were developed and used to evaluate the progress made in achieving this objective:

- Review transportation plans and programs prepared and adopted by State, Regional and local governments during 1996 and 2002; and
- Review and analyze Metrorail and Metrobus boarding information and compare the boarding rates with the County's population growth rates for same period.

Objective Achievement Analysis. The Metropolitan Planning Organization's (MPO) Transportation Improvement Plan (TIP) is revised annually and the Long Range Transportation Plan (LRTP) was updated twice since 1995, in May 1999 and December 2001. The following committees assist MPO in developing the TIP and LRTP: Transportation Planning Technical Advisory Committee (TPTAC); Citizens' Transportation Advisory Committee (CTAC); Bicycle/Pedestrian Advisory Committee (BPAC); Long Range Transportation Plan Steering Committee (LRTPSC); and the Transportation Planning Council (TPC). The following State, regional and County agencies and departments and municipalities are represented in some of the technical committees: Florida Department of Transportation (FDOT); Florida Department of Transportation Turnpike District; Florida Department of Environmental Protection (FDEP); South Florida Regional Planning Council (SRPC); Tri-County Commuter Rail Authority; Broward County MPO; Miami-Dade Expressway Authority; Miami-Dade County MPO; Miami-Dade County Department of Planning and Zoning (DP&Z), Public Works Department (MDPWD), Department of Environmental Resources Management (DERM), Miami-Dade Transit (MDT), Bicycle/Pedestrian Coordination Office, Seaport Department, Aviation Department and Office of Public Transportation Management (OPTM), Miami-Dade League of Cities, and the Cities of Miami, North Miami, Miami Beach and Hialeah. The citizens advisory committees are formed by community leaders concerned with transportation issues and professionals in the field of architecture, engineering, and other disciplines. All changes to the TIP and LRTP need to be reflected in the CDMP. All these committees review the proposed transportation projects for operational need, transportation mode choice and modal linkages between major generators and attractors.

The last update of LRTP, the Year 2025 LRTP, was a major refinement and enhancement of the 2020 LRTP. This update resulted in a complete reassessment of the future capital and operational needs for the County's multimodal network and, therefore, the future traffic circulation network and mass transit system. Details regarding this major update of the LRTP on the traffic circulation network and mass transit system are discussed further in the Traffic Circulation, Mass Transit, Aviation, Port of Miami River and Port of Miami Subelements of this Element. As a result of this major update, all these subelements will be adjusted during future

CDMP amendment cycles to reflect the findings of this planning activity, in keeping with the goals, objectives and policies of the CDMP.

Policy 1A of this Element calls for the County to promote mass transit alternatives to the personal automobile, such as rapid transit (i.e. heavy rail, light rail and express buses), fixed route bus and paratransit services. Transit service is coordinated with the locations and intensity of designated future land uses patterns as identified on the County's adopted 2005 and 2015 Future Land Use Plan Map, and service extensions are based upon population and employment projections, which are derived from the land use category of the map.

Miami-Dade Transit (MDT) operates four modes of mass transit: Metrobus, Metrorail, Metromover and Special Transportation System. This integrated multimodal transit system services most of the urbanized area of Miami-Dade County and, therefore, provides transportation alternatives to the personal automobile. With the passage of the half-cent sales tax increase by the voters of Miami-Dade County on November 5, 2002, MDT will be able to use the funds generated by this dedicated source of revenues to improve bus service, rapid transit and major highways and roadways. Details regarding these improvements are discussed further in the Mass Transit Subelement Section of this report.

Policy 1B requires the County to continue to maintain programs for optimal development and expansion of the Port of Miami and aviation system, and continue to support viable operation and enhancement of the Port of Miami River. The Miami-Dade County Aviation Department (MDAD) continues to improve the aviation system capacity through the development of facilities and operational improvements to make the Miami International Airport (MIA) more competitive and to meet future forecast. MDAD has a large ongoing capital improvement program aimed at the renovation and expansion of existing and construction of new facilities to meet current and future passenger, cargo and general aviation demands at County airports, especially the MIA. More detail regarding programs for development and expansion of the aviation facilities are described in the Aviation Subelement of this report.

In 1998, the Florida Legislature created the Miami River Commission (MRC) as the official clearinghouse for all public policy and projects related to the Miami River. The MRC coordinates state, regional and local activities affecting the river. In April 2000, the Florida Legislature authorized the MRC, the City of Miami and Miami-Dade County to use the adopted urban infill statute in the preparation of a multi-jurisdictional plan for the entire Miami River Corridor. Later in 2000, the County and the City entered a Joint Planning Agreement for the purpose of designating an urban infill and redevelopment area for the river from Biscayne Bay to the Salinity Dam, west of LeJeune Road. The Plan was prepared in June 2002. Although the local governments have not officially adopted by the Plan, the City and County have been working on the implementation of the recommendations. Additional information regarding the plan for the redevelopment and expansion of the Port of Miami River corridor is provided in the Port of Miami River Subelement of this report.

The Port of Miami's (POM), has witnessed the introduction of larger vessels in terms of size and passenger capacity that allows cruise lines to create greater efficiencies while offering expanded choices to their consumers. The growth in size of vessels affects the Port's ability to handle the

passenger demand and requires renovations and expansions in order to accommodate the increased demand. Consequently, the POM has developed a conceptual plan, the 2020 Master Development Plan, which accounts for increase cargo and passenger projections and redevelopment necessary to maintain the Port's position as the world's largest cruise port. More details regarding the plan for the development and redevelopment and expansion of the Port is further discussed in The Port of Miami Master Plan Subelement.

Policy 1C calls for the County to ensure that other transportation providers' plans provide high quality intermodal connections at optimal transfer points, including the Port of Miami tunnel, MIA west-side cargo area access improvements such as the NW 25 Street viaduct, and the Miami Intermodal Center (MIC). As stated above, County staff reviews FDOT's Five-Year Work Program, MPO's TIP and LRTP, MDT's Transportation Development Program (TDP), and other regional and local governments' transportation plans. Cargo facility improvements at MIA were completed in 1998. The construction of the MIC Rental Car hub and roadway access improvements is currently under construction and scheduled for completion in 2005. The Port of Miami tunnel improvement is planned in the 2025 LRTP as a Priority III project. Priority III projects are improvements planned for construction between the years 2015 and 2020.

Policy 1D lists a number of transportation projects to be developed with the time frame of the CDMP. Of all the projects listed only the Palmetto Metrorail Station was completed and Miami Intermodal Center and the Golden Glades Intermodal Center are currently under construction. The Palmetto Metrorail Station was inaugurated on May 30, 2003; the Golden Glades Intermodal Center is scheduled for completion in 2004 and the MIC in 2005. With regard to the Downtown Miami Transportation Center, Northeast Miami-Dade Terminal and Douglas Road Transit Center, these projects are still in the planning stages. The Mount Sinai Intermodal Transportation Center was determined unfeasible and, therefore, eliminated two years ago due to its high cost.

Policy 1F requires the County to vigorously implement the transit-supportive Land Use Element policies. The County continues to implement Land Use Element, Traffic Circulation and Mass Transit Subelement policies directed to discourage the use of Single Occupant Vehicles (SOVs) and reduce traffic congestion with the designation of urban centers at location having high countywide multimodal accessibility, development of master plans for development or redevelopment of the planned urban centers, and adoption of zoning ordinances to implement the plans. In December 1999, the County adopted the first ordinance creating the Downtown Kendall Urban Center Zoning District for the area known as Dadeland located south of the Snapper Creek Expressway between US 1 and the Palmetto Expressway. Currently, the County is in the process of developing master plans and implementing zoning ordinances for two other urban centers, Goulds and Naranja Community Urban Centers along South Dixie Highway in South Miami-Dade County.

The Adopted Population Projections for Miami-Dade County from 1990 to 2020 reveal that the population of the County increased from 2,124,885 people in 1996 to 2,283,319 in 2001, or approximately 7.46%. Mass Transit boarding, on the other hand, increased from 79,754,091 in 1996 to 84,005,249 in 2001, or approximately 5.33%. Therefore, transit boarding did not increase at the same rate as the resident population growth during the reporting period.

Consequently, this part of Objective 1 that transit boarding will increase at the rate equal or greater than the rate of resident population growth was not achieved.

In conclusion, Miami-Dade County has made progress in achieving this objective; however, more needs to be done. With the adoption of the half-cent sales tax and the implementation of the People's Transportation Plan several proposed rapid transit, bus service and roadway and highway improvements will help alleviate roadway congestion and hopefully encourage transit ridership. This objective remains relevant and should be retained. However, the requirement that the transit boardings should increase at a rate equal or greater than the rate of population growth during the reporting period was not achieved and, therefore, the target date to achieve this goal should be changed from "2002" to "2025", the target year for completion of the rapid transit improvements and proposed year for the new planning horizon for the CDMP.

Policy Relevance. All policies under this objective were reviewed for continued relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained. However, Policy 1D should be amended to delete the MIC, Palmetto Metrorail Station, Golden Glades Interchange Multimodal Facility and Mount Sinai Intermodal Center of the list of intermodal facilities development under this policy. The reason is because the Palmetto Metrorail Station was completed on May 30, 2003, and the Golden Glades Interchange Multimodal Center and MIC are currently under construction and scheduled for completion in 2004 and 2005, respectively. The Mount Sinai Intermodal Transportation Facility should be deleted from the list because it wad determined no longer feasible.

Objective 2

In furtherance of pedestrianism as a mode of transportation encouraged in the planned urban area, by 2002 Miami-Dade County shall enhance its transportation plans, programs and development regulations as necessary to accommodate the safe and convenient movement of pedestrians and non-motorized vehicles, in addition to automobiles and other motorized vehicles.

CDMP Monitoring Measures. The adopted monitoring measure for Objective 7 of the Traffic Circulation Subelement will be used as a surrogate monitoring measure to evaluate the progress made in achieving this objective:

> Location of bicycle and pedestrian facilities through site planning, plat reviews, and review of other transportation improvement plans, and implementation status of the Metro-Dade Bicycle Facilities Plan.

Objective Achievement Analysis. Miami-Dade County continues to promote and assist in the creation of a Countywide system of interconnected designated bicycle ways through the implementation of the Metro-Dade Bicycle Facilities Plan, review of transportation plans, site plans and plats.

There are over 30 potential greenway corridors identified through the South and North Dade Greenways Master Plans. The projects will utilize canal, railroad and transit rights-of-way. Sections of some of these corridors have been completed, are under construction or funded for

construction in the MPO's 2004 TIP. Table 2.2-1 below shows the non-motorized transportation improvements completed during this reporting period.

Table 2.2-1
Non-Motorized Facilities Since 1995

Name/Location	Segment	Length/miles
South Miami-Dade Trail	Dadeland Blvd. to SW 112 Ave.	8.5
Ludlum Canal Path	NW 38 St. to Crane Ave.	1.1
Miami Canal Path	Crane Ave. to Albatross St.	2.2
MacArthur Causeway	Biscayne Blvd. to Terminal Island	2.5
Snake Creek Trail	NE 20 Ave. to NE 183 St. (along C-9 Canal)	1.6
Everglades Trail	SW 136 St. to SR 9336 (along C-111 Canal)	24.0
Southern Glades Trail	SR 9336 to US-1	13.0
SW 137 Avenue	SW 336 St. to SW 288 St.	3.0
Kendall Lakes Country Club	SW 146 Ave./SW 59 St./SW 68 St./ Kendall Lakes Cir.	4.2
SW 72 Street	SW 147 Ave. to SW 127 Ave.	2.0
SW 142 Avenue	SW 88 St. to SW 72 St.	1.0
SW 84 Street	SW 142 Ave. to SW 127 Ave.	0.6
FIU Bay Vista Campus	Around Bay Vista Campus	1.6
Pine Tree Drive	52 Street to 63 Street	1.1
Tahiti Beach Road	Cocoplum Circle to Isla Dorada Blvd.	0.5
Turnberry Country Club	N/S/E/W Country Club Drives	2.8
NE 151 Street	Biscayne Blvd. to University Dr.	1.1

Source: Metropolitan Planning Organization, Miami-Dade County, April 2003.

Currently, the only bike path under construction is the bicycle facility along the South Miami-Dade Busway extension from SW 112 Avenue to SW 264 Street.

Both FDOT and Miami-Dade Public Works Department have developed design guidelines for incorporating sidewalks and bicycle facilities in roadway projects. The Metropolitan Planning Organization (MPO) Bicycle/Pedestrian Advisory Committee reviews and comments on the programmed and planned transportation projects in the TIP and the LRTP, respectively. Staff of the County's Bicycle/Pedestrian Coordination Office also reviews all transportation related projects through the Advance Notification review process and offers comments to improve and promote pedestrian and bicycle safety, comfort and attractiveness.

In 1995, Miami-Dade Transit (MDT) began the bike on buses program to outfit its buses with racks that carry two bicycles. Almost half of the bus routes now use rack-equipped buses. The goal is to have the entire bus fleet equipped with bicycle racks by 2004.

On July 13, 1999, the BCC adopted Ordinance No. 99-81 establishing bicycle parking requirements for bicycle parking, bicycle racks and other means of storage. Bicycle parking is now required for all parks, shopping centers, offices, restaurants and other uses, other than airport or seaport terminals, single family, duplex or townhouse which are exempt, to provide racks or other means of storage at rates which are based on the total number of vehicle parking spaces required. Bicycle parking is required to be located near the entrances to the buildings, in a highly visible, well lighted location with enough clear space to facilitate easy use.

Miami-Dade County has a program for sidewalk improvements. The Quality Neighborhood Improvements Program (QNIP) is an ongoing program, which provides for the construction of new sidewalks and the restoration of existing sidewalks and pedestrian paths. Pedestrian improvements funded by this program include the provision of ADA curb cuts, repairs of existing sidewalks, and construction of new sidewalks/pedestrian paths to provide continuity and access to schools and public facilities.

In conclusion, Objective 2 has been implemented, continues to be relevant and should be retained. However, the target date in this objective should be changed from "2002" to "2008".

Policy Relevance. All policies under this objective continue to be relevant, are directive in nature and should be retained. However, Policy 2B should be modified to change its target year from 1999 to 2008. No changes to the text of the policies are presently recommended.

Objective 3

As provided in the policies hereinunder, during 1998 through 2002, Miami-Dade County shall cooperate with the Metropolitan Planning Organization for the Miami Urbanized Area (MPO) to enhance Miami area planning procedures, methodologies and analytical tools to improve analysis of relationships between transportation facility plans and programs, and local land use plans, development standards and implementing programs.

CDMP Monitoring Measures. The following surrogate monitoring measures was used to evaluate the progress made in achieving this objective:

- Changes to the procedures, methodologies and analytical tools proposed or adopted as a result of the 1998/99 Minor Update and 2000/01 Major Update of the Long Range Transportation Plan (LRTP); and
- Land use and Zoning changes as a result of Transportation Planning.

Objective Achievement Analysis. The MPO's LRTP was revised twice during this reporting period, in May 1999 and December 2001. Objective 3 calls for County agencies to cooperate with the MPO to enhance the planning procedures, methodologies and analytical tools to improve analysis of relationship between transportation plans and programs and local land use plans. It is the policy of Miami-Dade County that during the preparation of a major update of the LRTP the County will cooperate and work with the MPO to better coordinate transportation and land use planning and enhance intermodal qualities of transportation analysis and plans. The LRTP Steering Committee, the TPTAC, the BPAC, the CTAC, and the TARC normally review the update of the LRTP. As previously indicated, the 2025 LRTP was a refinement and enhancement of the previous update of the Year 2020 Plan, which was adopted in May 1999. Basically, the plan was updated using the same methodology, and LRTP Steering Committee and MPO did identify any transportation and land use plan changes needs to improve interrelationships. However, the upcoming update of the LRTP in 2004 should incorporate the newly approved the People's Transportation Plan projects.

Several Land Use Plan map and Traffic Circulation and Mass Transit Subelement changes were adopted as a result of Applications to amend the CDMP and transportation planning changes approved during this reporting period. These changes are listed below.

- Amended the LUP map and Traffic Circulation Subelement Figure 1, "Planned Year 2015 Roadway Network", to delete the proposed extension of SR 874 (Don Shula Expressway) from the Homestead Extension of the Florida Turnpike (HEFT) to SW 147 Ave.
- Amended Traffic Circulation Subelement Figure 3, "Roadway Functional Classification – 2010", and Figure 4, "Limited Access Roadway Facilities –2010", to reflect addition of a new full interchange at the HEFT and NW 12 Avenue; and Figure 1, "Planned Year 2015 Roadway Network", to change NW 107 Ave. between NW 25 St. and NW 41 St. from 4 to 6 lanes.
- Amended the Adopted 2005 and 2015 Land Use Plan map to change Krome Avenue from SW 328 St. to US 1 from two lanes (Minor Roadway) to four lanes (Major Roadway), and from SW 296 Street to SW 328 Street from four lanes (Major Roadway) to two lanes (Minor Roadway).
- Amended Traffic Circulation Subelement Figure 1, "Planned Year 2015 Roadway Network", to change North Kendall Dr. between SW 150 and SW 172 Avenues from 4 to 6 lanes; and add Policy 1L under Objective 1.
- Amended the Mass Transit Subelement Figure 1, "Future Mass Transit System 2005 - 2015, Metrobus Service Area and Rapid Transit Corridors", to move "Transit Center" symbol from vicinity of SW 157 Avenue to vicinity of SW 162 Avenue and North Kendall Drive; and revised Figure 2, "Future Mass Transit System 2005 – 2015, Metrobus Service Area and Rapid Transit Corridors", to add SW 162 Avenue between North Kendall Drive and SW 104 Street and SW 104 Street between SW 157 and 162 Avenues in the "Year 2005 Potential (Metrobus) Service Expansion", and to move North Kendall Drive "Transit Corridor" symbol westward ½ mile.
- Amended Traffic Circulation Subelement Figure 1, "Planned Year 2015 Roadway Network", to change North Kendall Drive between SW 162 and 167 Avenues from 4 to 6 lanes.
- Amended Mass Transit Subelement Figure 4, "Major Existing Traffic Generators and Attractors – 2015", to include the area between NW 12 and 25 Streets and between theoretical NW 137 Avenue and HEFT as "Other Employment Center," and Traffic Circulation Subelement and Land Use Plan map to add and modify certain roadways.
- Amended Traffic Circulation Subelement Figures 1 and 3 and Land Use Plan map to delete the segment of SW 85 Avenue between SW 213 and 216 Streets.
- Amended Land Use Plan map and Traffic Circulation Subelement Figure 1, "Planned Year 2015 Roadway Network" to change the designation of Krome Avenue between US 27 and SW 328 Street from Minor Road (2 lanes) to Major Road (3 or more lanes). This amendment has been challenged by a third party and, therefore, is not in effect.

In conclusion, this objective has been partially achieved, continues to be relevant and should be retained. The phrase "during 1998 through 2002" will be removed from this Objective.

Policy Relevance. All policies under this objective are directive in nature, remain relevant and should be retained. However, the target years of Policies 3A and 3B should be changed from 2000/2001 and 1998/1999 to 2007/2008 and 2003/2004, and respectively.

2.2.1 Traffic Circulation Subelement

The Traffic Circulation Subelement was originally one of the eleven elements of the County's Adopted Comprehensive Development Master Plan (CDMP). As a result of the 1995 Evaluation and Appraisal Report (EAR), new requirements of State planning law and changes needed to update the CDMP, the element was modified to implement the adopted 1995 EAR recommendations and relocated to the then proposed Transportation Element upon adoption of the EAR-based amendments to the CDMP on October 10, 1996.

This section of the EAR evaluates the progress made in achieving the adopted Traffic Circulation Subelement objectives as of the date of this report. Objective achievement analysis involves the use of information outlined in the adopted monitoring measures to monitor progress and assess achievement of the various objectives outlined in this Subelement. Where a listed monitoring measure could not be used to adequately address a particular objective, an appropriate surrogate measure was developed and applied to evaluate objective achievement. In instances where neither a listed monitoring measure nor a surrogate measure could be used or adequately developed, then objective achievement was evaluated through a policy implementation assessment. Each Transportation Circulation Subelement objective is listed below followed by a description of the monitoring measure associated with that objective and objective achievement analysis and a policy relevancy analysis.

Suggestions, where appropriate, are included for the need to revise objectives in order to make them more specific and measurable, or to revise the Element's monitoring program to provide logical measurable standards where the current measures are vague or inadequate. An analysis of policy relevance is also discussed below. All policies under each element objective are reviewed for continued relevance, but only those policies which may require some revision are identified and addressed.

Objective 1

It is desirable that all roadways in Dade County operate at level of service (LOS) C or better. By the year 2005 no roadways in Dade County should operate at a level of service lower than the base level of service standard contained herein.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

Attainment of adopted traffic circulation level of service standards.

Objective Achievement Analysis. Policy 1B under this objective establishes the County's minimum acceptable peak-period[1] operating level of service (LOS) for all State and County roads in Miami-Dade County. Adopted roadway LOS standards vary depending on the classification of the roadway, roadway location, and availability of transit. Table 2.2.1-1 below summarizes the adopted peak-period LOS standards for all State and County roads in Miami-Dade County.

Table No. 2.2.1-1
Peak-Period Roadway LOS Standard
Non-FIHS Roadways

Location	Transit Availability		
	No Transit Service	20 Min. Headway Transit Service Within 1/2 Mile	Extraordinary Transit Service (Commuter Rail or Express Bus)
Outside UDB	LOS D-State Minor Arterials LOS C-County Roads and State Principal Arterials		
Between UIA and UDB	LOS D (90% of Capacity); or LOS E on SUMAs (100% Capacity)	LOS E (100% of Capacity)	120% of Capacity
Inside UIA	LOS E (100% of Capacity)	120% of Capacity	150% of Capacity

FIHS Roadways

FIHS Facility	Location				
	Outside UDB	Inside UDB	Roadways Parallel to Exclusive Transit Facilities	Inside Transportation Concurrency Management Areas	Constrained or Backlogged Roadways
Limited Access Facilities	B	D [E]	D [E]	D [E]	Manage
Controlled Access Facilities	B	D [E]	E	E	Manage

Notes: LOS inside of [brackets] applies to general use lanes only when exclusive through lanes exist.
FIHS = Florida Intrastate Highway System
UIA = Urban Infill Area – Area east of, and including NW/SW 77 Avenue and SR 826 (Palmetto Expressway), excluding the City of Islandia and the area north of SR 826 and west of I-95.
UDB = Urban Development Boundary
SUMA = State Urban Minor Arterial

In 1998, the Florida Department of Transportation (FDOT) modified the adopted LOS Standards for controlled access facilities on the Florida Intrastate Highway System (FIHS). For rural FIHS two-lane facilities, the standard is "C" until such time as the facility is improved to four or more lanes when the "B" standard would apply. For FIHS controlled access facilities inside urbanized areas with population over 500,000 the adopted LOS standard is D. Consequently, Subsection 1(B)(3)(a)(1) of Policy 1B of this Subelement should be amended to reflect this change.

Policy 1C calls for the County to maintain and enhance as necessary a comprehensive traffic count system for annually monitoring the level of service on the County's roadway system. LOS conditions are monitored and evaluated on a monthly basis as a function of the County's

[1] Peak-period means the average of the two highest consecutive hours of traffic volume during a weekday.

Concurrency Management System (implemented by Ordinance Number 89-66 and Administrative Order 4-85). The operating LOS condition is derived from traffic count data provided by Miami-Dade County Department of Public Works and the FDOT.

Roadway LOS standards are expressed as a volume-to-capacity (v/c) ratio, which is the ratio of the number of vehicles to the road capacity during peak time periods. Peak roadway capacities are determined using FDOT's Generalized Level-of-Service Tables, the computer generated LOS tables using the ART-TAB spreadsheet model, which were developed based on the definitions and methodology of the 1994 Highway Capacity Manual (HCM). The average daily traffic volumes derived from the 2002 traffic counts provided by FDOT and Public Works Department were converted to peak-period volumes using a conversion factor developed by County staff. The resulting calculation of v/c ratios for all roadway segments was compared to the v/c ratios shown in Table 2.2.1-2 to determine LOS.

Table 2.2.1-2
Roadway Level of Service Description

V/C Ratio		LOS	Description
0.0 - 0.60	=	LOS A:	free flow traffic at average travel speed
0 .61 - 0.70	=	LOS B:	stable flow with the presence of other users in traffic stream being noticeable
0.71 - .080	=	LOS C:	uncongested with other users in traffic stream causing significant interactions
0.81 - 0.90	=	LOS D:	congested stable flow with major delays
0.91 – 1.00	=	LOS E:	very congested with traffic at or near capacity
1.01+	=	LOS F:	extremely congested with breakdown flow (major delays occurring frequently)

Source: Highway Capacity Manual, Special Report 209, Third Edition (1994).

Existing Level of Service. Figure 2.2.1-1 below reflects the 2002 LOS conditions at the time the EAR was prepared. A total of 645 roadway segments were analyzed. Of these, 44 are shown to be operating at LOS F, 26 at LOS E, 109 at LOS D and 466 segments at LOS C or better. It should be noted that the peak-period operating conditions shown here represent actual traffic condition. Major congestion problems existed in a number of important travel corridors. To the northwest, conditions on portions of NW 72, 67, 57 and 7 Avenues, NW 183, 138, 122, 119, 79, 36 and 25 Streets, and W. Flagler Street were extremely congested. To the southwest, conditions on portions of SW 137, 127, 67, 57, 42, 37 and 27 Avenues, SW 56, 72, 88 and 112 Streets, and Old Cutler Road and Caribbean Blvd. were also extremely congested. In addition, portions of SR 826/Palmetto Expressway were congested.

Policy 1D requires that the issue of development orders for new development or significant expansions of existing development to be contingent upon compliance with the LOS standards contained in Policy 1B, except as provided in the County's Concurrency Management Program Section of the Capital Improvement Element. As mentioned above, current LOS conditions are monitored and evaluated on a monthly basis as a function of the County's Concurrency

Management Program. The concurrency LOS differs from current LOS in that the provisions of the Currency Management System are applied to each roadway LOS calculation. The committed development trips of approved development are applied to traffic counts affecting specific roadway segments and allowances for increases in roadway capacity are included in any given segment where capacity improvements are programmed for construction within the next three years. Future transit availability is also considered as a component of the LOS standards. These committed development trips and programmed capacity improvements are tallied monthly with every development approval. Figure 2.2.1-2 below shows the concurrency LOS violations as of January 31, 2003. A total of 44 roadway segments have concurrency violations, 30 segments within the UIA, 12 between the UDB and the UIA, and two outside the UDB.

Two Comprehensive Development Master Plan Amendments approved during this reporting period have affected the Concurrency Management Program. On October 1996 the Board of County Commissioners (BCC) adopted Ordinance No. 96-157 approving revisions to the Urban Infill Area boundary. These revisions removed the area from the Broward County line to SR 836/Palmetto Expressway and west of I-95 as part of the Urban Infill Area. Ordinance No. 99-42 adopted by the BCC on April 27, 1999, amended the Concurrency Management Program Section of the Capital Improvement Element to provide for transportation concurrency exceptions for development proposals that are consistent with the adopted CDMP, promote public transportation and meet other criteria pursuant to Section 163.180, F.S.

Table 2.2.1-3 identifies all roadway segments within the County that fail to meet the adopted LOS Standards and identifies those roadway segments currently programmed or planned for capacity improvements in the County's 2004 Transportation Improvement Program (TIP) or Transportation Plan for the Year 2025, respectively. Table 2.2.1-3 includes those roadway segments inside the Urban Infill Area (UIA) even though they are within the County's exception area.

The improvements programmed in the 2004-2008 Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP) are expected to improve nine of the deficient segments, improvements planned in the 2025 MPO Long Range Transportation Plan (LRTP) are expected to improve six segments, and improvements planned in the People's Transportation Plan will improve one deficient roadway segment. The remaining segments will affect development until roadway capacity and/or mass transit service are improved to meet the adopted LOS standards.

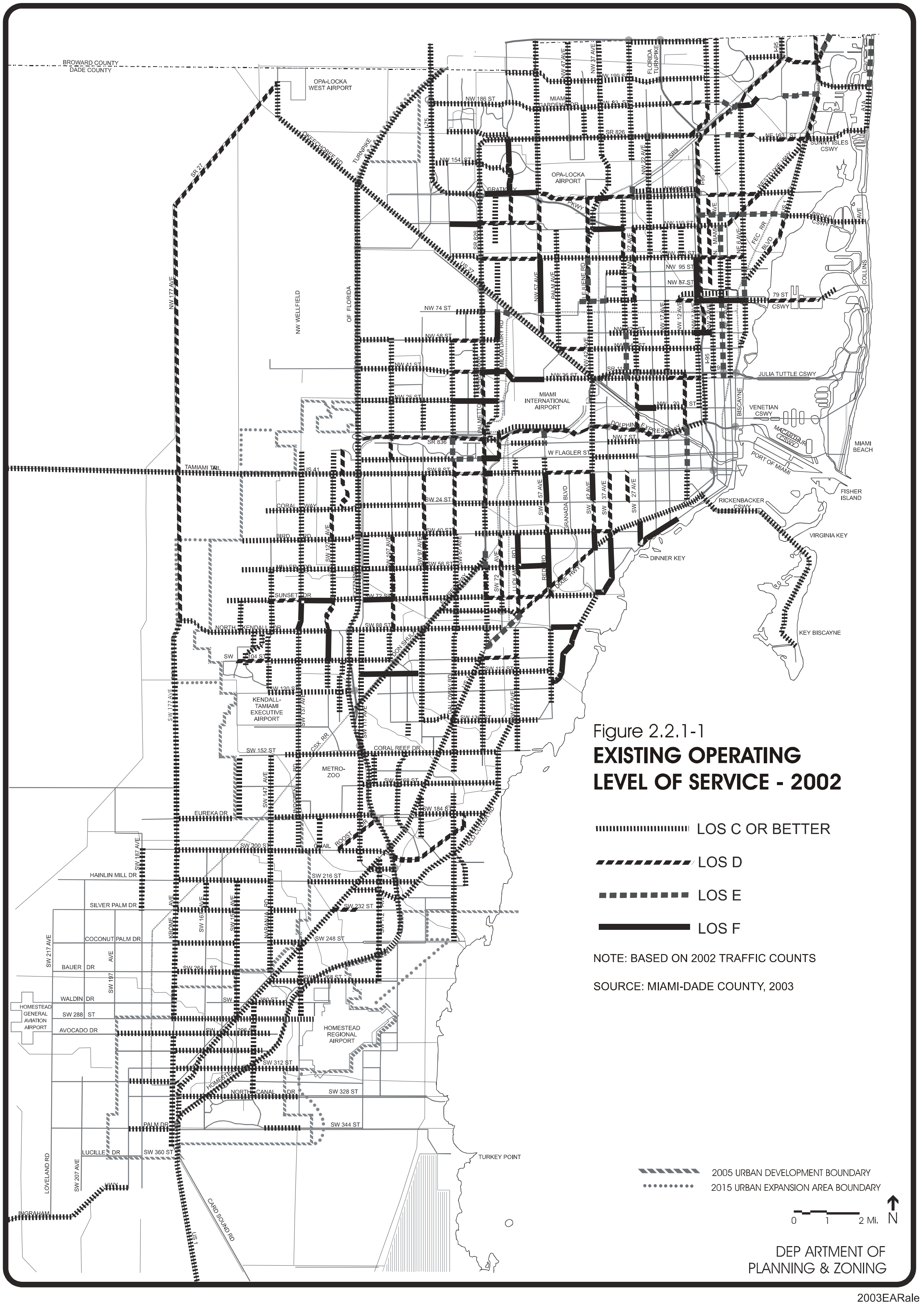


Figure 2.2.1-1
EXISTING OPERATING
LEVEL OF SERVICE - 2002
LOS C OR BETTER
LOS D
LOS E
LOS F
NOTE: BASED ON 2002 TRAFFIC COUNTS
SOURCE: MIAMI-DADE COUNTY, 2003
2005 URBAN DEVELOPMENT BOUNDARY
2015 URBAN EXPANSION AREA BOUNDARY
0 1 2 Mi.
N
DEP ARTMENT OF
PLANNING & ZONING
BROWARD COUNTY
DADE COUNTY
OPA-LOCKA WEST AIRPORT
OPA-LOCKA AIRPORT
MIAMI INTERNATIONAL AIRPORT
KENDALL-TAMIAMI EXECUTIVE AIRPORT
METRO-ZOO
HOMESTEAD REGIONAL AIRPORT
HOMESTEAD GENERAL AVIATION AIRPORT
TURKEY POINT
MIAMI BEACH
FISHER ISLAND
VIRGINIA KEY
KEY BISCAYNE
DINNER KEY
RICKENBACKER CSWY
VENETIAN CSWY
JULIA TUTTLE CSWY
PORT OF MIAMI
SUNNY ISLES CSWY
TAMIAMI TRL
NW WELLFIELD
CARD SOUND RD
US 1

2003EARale

Table 2.2.1-3
Deficient Roadway Segments

Roadway	Segment	TIP	LRTP Lanes/Priority	PTP
SR 997/Krome Ave.	Okeechobee Rd. to SW 8 St.	Add turn lanes	No	No
SR 997/Krome Ave.	SW 8 St. to SW 88 St.	Add turn lanes	No	No
SW 137 Ave.	SW 72 St. to SW 88 St.	4 to 6 lanes	No	No
SW 127 Ave.	SW 26 St. to SW 42 St.	No	No	No
SW 127 Ave.	SW 88 St. to SW 104 St.	2 to 5 lanes	No	Yes
SR 826/Palmetto Expy.	SW 56 St. to SR 874	8 to 10 lanes	No	No
NW 72 Ave.	NW 74 St. to NW 58 St.	2 to 4 lanes	No	No
SW 72 Ave.	SW 56 St. to SW 72 St.	No	No	No
SW 67 Ave.	SW 56 St. to SW 40 St.	No	No	No
NW 62 Ave.	NW 138 St. to NW 122 St.	2 to 3 lanes	No	Yes
NW 57 Ave.	NW 183 St. to State Road 826	No	No	No
NW 57 Ave.	State Road 826 to NW 138 St.	No	No	No
NW 57 Ave.	NW 138 St. to NW 103 St.	4 to 6 lanes	No	No
NW 57 Ave.	NW 103 St. to NW 79 St.	No	4 to 6 / II	No
SW 57 Ave.	SW 42 St. to US 1	No	No	No
NW 57 Ave.	State Road 836 to NW 7 St.	No	No	No
SW 57 Ave.	Flagler St. to SW 24 St.	No	No	No
SW 57 Ave.	SW 104 St. to SW 136 St.	No	No	No
SW 42 Ave./LeJeune	SW 40 St. to US 1	No	No	No
SW 37 Ave.	US 1 to Ingraham Hwy.	No	No	No
SW 27 Ave.	US 1 to South Bayshore Dr.	No	No	2 to 3
NE 183 St.	NE 6 Ave. to NE 10 Ave.	No	4 to 6 / II	No
NW 186 St.	NW 57 Ave. to NW 67 Ave.	No	No	No
NW 138 St.	SR 826 to NW 57 Ave.	No	No	No
NE 135 St.	NE 6 Ave. to NE 10 Ave.	No	No	No
NW 122 St.	NW 87 Ave. to SR 826	No	2 to 5 / II	No
NW 119 St.	NW 37 Ave. to NW 27 Ave.	No	No	No
SW 88 St.	SW 167 Ave. to SW 157 Ave.	4 to 6 lanes	No	No
SW 104 St.	US 1 to SW 87 Ave.	No	No	No
NE/NW 79 St.	Biscayne Blvd. To NW 7 Ave.	No	No	No
SW 56 St.	SW 67 Ave. to SW 57 Ave.	No	No	No
NW 62 St.	NW 7 Ave. to NW 2 Ave.	No	No	No
NW 54 St.	Okeechobee Rd. to Ponciana Blvd.	No	No	No
E 1 Ave. (Hlh.)	Okeechobee Rd. to Ponciana Blvd.	No	No	No
East Dr. (Mia. Spring)	Okeechobee Rd. to Ponciana Blvd.	No	No	No
NW 25 St.	NW 87 Ave. to SR 826	No	5 to 6 / I	No
NW 25 St.	SR 826 to NW 72 Ave.	No	4 to 6 / IV	No
NW 17 St.	NW 37 Ave. to NW 27 Ave.	No	No	No
State Road 836	SW 107 Ave. to SW 42 Ave.	No	Express Lanes	No
South Bayshore Dr.	Aviation Ave. to SW 17 Ave.	No	No	No
Ingraham Hwy.	LeJeune Rd. to McFarland	No	No	No
NW 12 St.	NW 87 Ave. to State Road 826	No	No	No
NW 12 St.	State Road 826 to NW 72 Ave.	No	No	No
Old Cutler Rd.	SW 88 St. to SW 57 Ave.	No	No	No

Source: Miami-Dade County Department of Planning and Zoning, Public Works Department and Metropolitan Planning Organization, 2003.

Notes: TIP = Transportation Improvement Program 2004;
LRTP= MPO Long Range Transportation Plan for the Year 2025.
PTP = People's Transportation Plan.

Roadway capacity improvement projects currently under construction include:

• HEFT	I-75 to Okeechobee Rd.	Widen 4 to 6 lanes
• HEFT	SR 836 to Okeechobee Rd.	Widen 4 to 6 lanes
• W 137 Ave.	NW 12 St. to SW 8 St.	New 4-lane
• SW 137 Ave.	SW 8 St. to SW 26 St.	New 6-lane
• SW 97 Ave.	SW 40 St. to SW 8 St.	Widen 2 to 3 lanes
• NW 95 St.	NW 27 Ave. to NW 7 Ave.	Widen 4 to 5 lanes
• NW 79 Ave.	Okeechobee Rd. to NW 74 St.	New 5-lane
• SR 826	NW 122 St. to Okeechobee Rd.	Widen 8 to 10 lanes
• SR 826	NW 62 St. to NW 47 St.	Widen 8 to 10 lanes
• SR 826	NW 19 St. to SW 32 St.	Widen 8 to 10 lanes
• NW 47 Ave.	Bridge over Little River Canal	Widen to 5 lanes
• SR 860	NW 57 Ave to NW 28 Pl.	Widen 4 to 6 lanes
• SW 2 Ave.	Bridge over Miami River	Widen 2 to 4 lanes
• SR 25	W 19 St. to SE 7 Ave.	Widen 4 to 6 lanes
• SR 836	NW 137 Ave. to NW 107 Ave.	New 4-lane
• SW 184 St.	US 1 to Franjo Rd.	Widen 2 to 5 lanes

Other potential solutions to improving the operating deficiency of the existing thoroughfares and reduce peak hour congestion include intersection capacity improvements, increase in transit service and headways, and transportation demand management (TDM) and transportation system management (TSM) strategies to mitigate development impacts. TDM strategies currently implemented include:

- Van pooling and car-pooling;
- Employer-based staggered and/or flexible work hours;
- Park and ride lots at Metrorail stations and Metrobus routes;
- High-occupancy vehicle lanes;
- Transportation Management Associations (TMAs);
- Special transportation system for the economically disadvantaged, the elderly and disabled individuals; and
- Subsidies for transit riders.

On November 5, 2002, the citizens of Miami-Dade County approved a half-cent sales tax increase to be the dedicated source of revenue to support transportation improvements and to fund the People's Transportation Plan. The Plan calls for the implementation of bus service, rapid transit and major highway and road improvements. Bus service improvements include increases of bus fleet, service miles, operating hours and better headways during peak and off-peak hours. Rapid transit improvements include construction of up to 88.9 miles of countywide rapid transit lines. Major highway and road improvements include supplement funding to upgrade the County's traffic signalization system, safety enhancements and lane improvements. Table 2.2.1-3 also shows those roadway improvements planned in the People's Transportation Plan, which will improve deficient segments. These improvements will help alleviate traffic congestion and meet roadway LOS standards. Bus service improvements are scheduled for

implementation between 2003 and 2008; highway and road improvements are scheduled for implementation between 2003 and 2013; and rapid transit improvements are scheduled for implementation between 2003 and 2025.

Policy 1G directs the County to continue to implement procedures and requirements for all development, regardless of size, to contribute its proportionate share of transportation facilities, or funds or land necessary to accommodate the impact of the proposed development. This policy continues to be implemented through the adopted Road Impact Fee Ordinance and the Impact Fee Manual.

Policy 1I calls for the County to investigate and develop by 1998 parking management strategies to promote the land use and transportation objectives of the CDMP to reduce the use of Single Occupant Vehicles (SOVs) and highway congestion and encourage the use of transit and ridership. In 1994, the MPO retained the Center for Urban Transportation Research (CUTR) to prepare the Countywide Parking Policy Study (December 1994). The goal of the study was to present the MPO with information obtained from literature research and review of local current policies to be used in conjunction with the development of tasks associated with the study. Subsequently, the MPO initiated the study in 1995. The study addressed the countywide goals of transportation improvement, air quality enhancement, economic development, and the promotion of energy conservations. The recommendations of the study have not been implemented. At present, Miami-Dade County does not have a coordinated and cohesive parking policy. However, this policy has been partially achieved, continues to be relevant and should be retained.

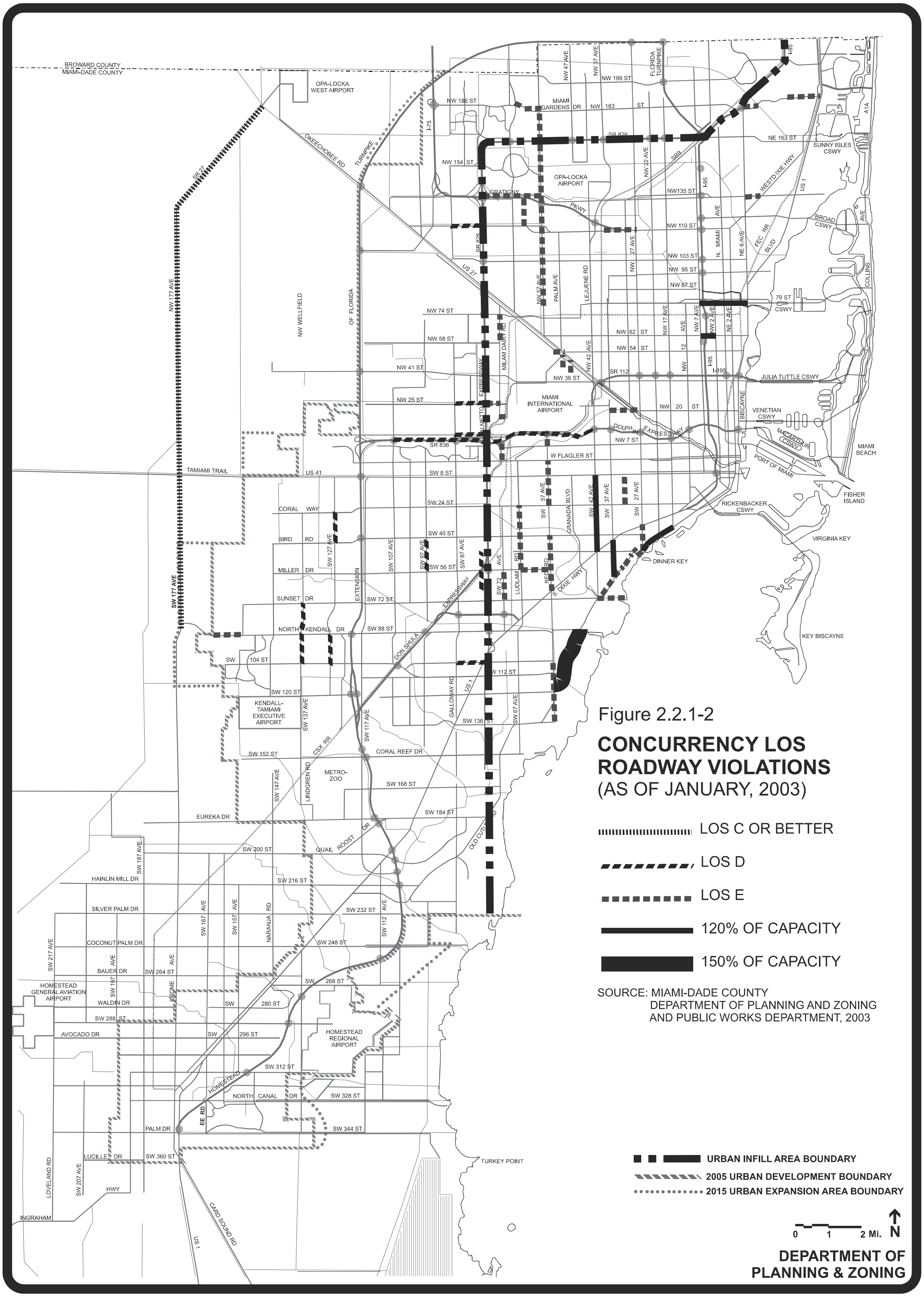


Figure 2.2.1-2
CONCURRENCY LOS ROADWAY VIOLATIONS
(AS OF JANUARY, 2003)

New2/96Revised02/03

However, it should be pointed out that the County continues to implement policies directed to discourage the use of SOVs and reduce traffic congestion. With the designation of urban centers at locations having high countywide multimodal accessibility, development of master plans for development of the centers and adoption of zoning ordinances to implement the plans, the County is creating well designed urban centers that will encourage convenient alternative to travel by automobile, provide more efficient land use and create identifiable "town centers". Also, with the new requirements for shared parking in the planned urban centers, the County is implementing Policy 1A of the Land Use Element and Policy 1I of the Traffic Circulation Subelement.

Policy 1L provides for the MPO to consider the feasibility of widening the roadways listed below during the major update of the LRTP.

- Sunset Drive (SW 72 Street), between the Homestead Extension of the Florida Turnpike and SW 152 Avenue, from 4 to 6 lanes; and
- SW 120 Street, between SW 137 and 147 Avenue, from 4 to 6 lanes.

This policy has been achieved as both of these segments have improvements listed in the 2025 LRTP as Priority III projects. Priority III projects are improvements to be completed between the years 2015 and 2020.

In conclusion, the results of the LOS analyses performed by the Miami-Dade County Public Works Department and presented in Figure 1 and Table 3 indicate that not all roadway segments in Miami-Dade County are operating at or lower than the adopted roadway LOS standards. In fact, 44 roadway segments have failed to meet the operating LOS standards as of January 31, 2003. Therefore, this objective has not been achieved. Moreover, Objective 1 needs to be modified since it is not realistic to expect that all roadways in Miami-Dade County will ever operate at level of service (LOS) C or better. In fact, adopted LOS standards for roadways within the UIA allow roadways to operate at 150% of their capacity because of the presence of extraordinary transit. The reason for this LOS standard is to promote infill development and discourage suburban sprawl. However, it should be pointed out that the County has and will continue to strive to look for alternate solutions to reduce the use of single occupant vehicles (SOVs) and traffic congestions and encourage the use of transit and ridesharing. Therefore, planning horizon of this objective should be extended from 2005 to 2010.

Policy Relevance. All policies under this objective were reviewed for continued relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained. However, Policy 1B should be amended to reflect FDOT's changes to the adopted FIHS LOS Standards for rural and urban controlled access facilities. LOS standards for rural controlled access facilities changed from LOS C for two-lane facilities to LOS B for four or more lanes facilities, and for urban controlled access facilities changed from LOS D [E] to LOS D. Policies 1I and IJ have not been achieved, remain relevant and should be retained, but the planning horizon of Policy 1I should be extended from 1998 to 2005. Policy IL, on the other hand, has been achieved, is not longer relevant and should be removed.

Objective 2

Right-of-way and corridors needed for existing and future transportation facilities will be designated and reserved.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Enforcement of minimum right-of-way requirements established in Chapter 33 of the Code of Miami-Dade County and Public Works Manual either through acquisition or dedication.

Objective Achievement Analysis. The County continues to achieve this objective through the enforcement of the minimum rights-of-way requirements established in Chapter 33 of the Code of Miami-Dade County. For all section line roadways the minimum right-of-way width is 80 feet and for half-section line roadway the minimum is 70 feet unless otherwise specified in Section 33-133 of the Code. Since 1995, Section 33-133 has been amended. Ordinance 96-149, adopted in October 1996, eliminated the need for right-of-way dedication of 117 Avenue from SW 8th Street to NW 106 Street. Ordinance 02-106, adopted in June 2002, temporarily eliminated the zoned rights-of-way for NW 112 Avenue, from NW 106 Street to NW 122 Street, and NW 114 Street, from NW 107 Avenue to NW 117 Avenue (Homestead Extension to the Florida Turnpike). The latter provides for reduction of the minimum width requirements to zero (0). Recent State laws and Supreme Court decisions that protect property rights make it more difficult for local jurisdictions to protect rights-of-way needed for future transportation facilities.

In conclusion, Objective 2 is implemented by enforcing the minimum rights-of-way requirements established in the Code and the Public Works Manual through the site plan and subdivision approval processes. Therefore, this objective continues to be relevant and should be retained. No changes to the text of this objective are presently recommended.

Policy Relevance. All the policies under this objective continue to be relevant, are directive in nature and should be retained. No changes to the language of these policies are presently recommended.

Objective 3

The County's transportation system will emphasize safe and efficient management of traffic flow.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Enforcement of adopted roadway design standards and procedures in the Public Works Manual during the review of site plans and plats of proposed developments.

- Identify high accident-frequency locations and recommend remedial actions to alleviate hazardous conditions based on information provided by the Miami-Dade Police Department Data Systems Bureau.

Objective Achievement Analysis. This objective is been implemented since 1988 through the enforcement of the adopted roadway design standards and procedures in the Public Works Manual. All subdivisions approved and platted since 1995 have complied with the roadway design standards.

Table 2.2.1-4 identifies the 25 locations with the highest accident-frequency in Miami-Dade County. Fourteen locations were operating at LOS C or better, which may be an indication that congestion is not a significant factor in the occurrence of accidents. Four locations are included within segments operating at LOS E.

Table 2.2.1-4
High Accident Location in Miami-Dade County, 2002

2002 Rank	Location	No. of Accidents	No. of Fatalities	2002 LOS
1	NW 36 Street @ NW 72 Avenue	106		E
2	NW 36 Street @ NW 79 Avenue	100		D
3	SW 137 Avenue @ SW 152 Street	86		C or Better
4	SW 152 Street @ SW 117 Avenue	83		C or Better
5	SW 104 Street @ SW 117 Avenue	69		C or Better
6	NW 67 Avenue @ NW 167 Street	68		D
7	SW 72 Street @ SW 107 Avenue	65		E
8	NW 12 Street @ NW 107 Avenue	62		C or Better
9	NW 41 Street @ NW 97 Avenue	61	1	C or Better
10	SW 117 Avenue @ SW 72 Street	58		D
11	NW 12 Street @ NW 72 Avenue	55		E
12	NW 74 Street @ NW 72 Avenue	55	1	C or Better
13	SW 107 Avenue @ SW 24 Street	54		C or Better
14	SW 72 Street @ SW 117 Avenue	54		E
15	NW 36 Street @ NW 87 Avenue	53		D
16	NW 67 Avenue @ NW 174 Street	51		NA
17	SW 104 Street @ SW 107 Avenue	51		C or Better
18	SW 24 Street @ SW 82 Avenue	50		C or Better
19	NW 167 Street @ NW 67 Avenue	49		NA
20	NW 119 Street @ NW 27 Avenue	48		C or Better
21	NW 67 Avenue @ NW 169 Street	48		NA
22	NW 107 Avenue @ NW 12 Street	47		C or Better
23	SW 24 Street @ SW 75 Avenue	47		C or Better
24	SW 42 Street @ SW 127 Avenue	47		C or Better
25	SW 56 Street @ SW 137 Avenue	47		C or Better

Source: 2002 Crash and Fatality Report, Miami-Dade County Police Department.

Table 2.2.1-5 identifies the roadways with high accident-frequency locations that have been improved, improvement is under construction, or improvement is programmed or planned.

Table 2.2.1-5
Completed Improvements to High Frequency-Accident Locations

Location	Segment	Improvement	Status
NW 36 St. @ NW 87 Ave.	NW 87 Ave. to NW 77 Ave.	Widen 4 to 6 Lanes	Completed
NW 12 St. @ NW 107 Ave.	NW 111 Ave to NW 107 Ave.	Construct new 6 lanes	Completed
NW 41 St. @ NW 97 Ave.	NW 102 Ave. to NW 87 Ave.	Widen 2 to 6 lanes	Completed
SW 117 Ave. @ SW 72 St.	SW 72 St. to SW 56 St.	Widen 2 to 4 lanes	Completed
NW 74 St. @ NW 72 Ave.	NW 72 Ave. to SR 826	Widen 2 to 5anes	Under Const.
SW 24St. @ SW 82 Ave.	SW 87 Ave. SW 77 Ave.	Widen 4to 6 lanes	TIP 2004
NW 107 Ave. @ NW 12 St.	NW 27 St. to NW 12 St.	Widen 4 to 6 lanes	Completed

Source: Miami-Dade Metropolitan Planning Organization and Public Works Department, 2003.

Even though roadway capacity improvements have not been planned or programmed for the majority of roadways with high accident-frequency locations, the list of such locations will provide guidance for future scheduled improvements.

Miami-Dade County continues to enforce roadway design standards during the review of site plans and plats for proposed development. Such measures are in place to ensure the adequacy of street design for safety, traffic control and emergency access. Also, road improvements are being updated annually in the TIP and LRTP to address deficient road segments and alleviate hazardous conditions. In conclusion, this objective has been implemented, remains relevant and should be retained. No changes to the text of this objective are presently recommended.

Policy Relevance. The two policies under this objective continue to have relevance and should be retained. No changes to the language of these policies are presently recommended.

Objective 4

The Traffic Circulation Subelement will continue to be coordinated with the goals, objectives and policies of the Land Use Element, including the land uses, Urban Development Boundary and Urban Expansion Area designated on the Land Use Plan map, and with the goals, objectives and policies of all other Elements of the CDMP.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Quantify the number of Element amendments revised for consistency with the goals, objectives and policies of the Land Use Element, including the land uses, Urban Development Boundary and Urban Expansion Area designated on the Land Use Plan map, and with the goals, objectives and policies of all other Elements of the CDMP.

Objective Achievement Analysis. Section 2-116.1 of the Code of Miami-Dade County establishes the procedures for the CDMP to be reevaluated and amended periodically, usually semiannually. Current procedures provide for the filing of applications in April and October. Plan components eligible for amendment application during the semiannual filing periods are summarized below.

Application Filing Period (Month)	Plan Component Eligible for Amendment	
	Even-numbered Year	Odd-Numbered Year
April Period	All components except UDB, UEA and land use outside the UDB. [Mandatory Cycle]	All components including the UDB and UEA [Mandatory Cycle]
October Period	All components except UDB, UEA and land use outside the UDB [Optional Cycle]	All components except UDB, UEA and land use outside the UDB. [Mandatory Cycle]

Source: Section 2-116.1 Code of Miami-Dade County.

Amendments to all elements of the CDMP are analyzed to determine consistency with the goals, objectives and policies of the Traffic Circulation Subelement and the amendment's potential impact on the current and future roadway network. From 1995 to 2002 there have been 12 regular amendment cycles and four special amendment cycles. In total there were 29 small-scale Land Use Plan map amendments, 12 standard Land Use Plan map amendments, three Development of Regional Impact amendment applications, and two special settlement agreement amendment applications adopted. Two applications resulted in changes to the UDB and six in changes to the Traffic Circulation Subelement of the Transportation Element.

In conclusion, this objective has been achieved since all amendments to the CDMP have been analyzed for internal consistency with the Traffic Circulation Subelement. Therefore, this objective has been implemented, remains relevant and should be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. All the policies under this objective continue to have relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained. No changes to the language of these policies are currently recommended.

Objective 5

The traffic circulation system will protect community and neighborhood integrity.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Quantify the number of reviews processed for proposed roadway construction improvements, provided by oversight committees for the protection of community and neighborhood integrity

Objective Achievement Analysis. Each State and County roadway improvement project programmed in the TIP receives technical and public reviews before its inclusion in the TIP. Two technical committees, the Transportation Planning Technical Advisory Committee (TPTAC) and the Transportation Planning Council (TPC), and two citizens advisory committees, the Citizens Transportation Advisory Committee (CTAC) and the Transportation Aesthetic Review Committee (TARC), are responsible for the review of the projects for potential impacts on community and neighborhood integrity. The CTAC committee provides citizens with a forum to voice any concerns they may have regarding the need for and/or impacts of the projects and an opportunity to evaluate the recommendations of the technical committees. The TARC ensures

that high visibility transportation projects, i.e. bridges, are reviewed for their aesthetic impact on the community.

Executive Order 95-359 requires FDOT to request permitting and permit reviewing agencies to review transportation-related projects for consistency with the adopted CDMP, Long Range Transportation Plan, Transportation Improvement Plan and any other local plan. The agencies through the Advance Notification process review the proposal and furnish FDOT with comments they consider pertinent at the time of the review. Miami-Dade County Department of Planning and Zoning (DP&Z) is the County agency responsible for review, evaluation and coordination of the comments on the proposed transportation projects. Eight County departments review and comment on the proposed projects and DP&Z compiles their comments for collective submission to FDOT. Since 1995, staff of Miami-Dade County has reviewed and provided written comments on 31 FDOT transportation projects and attended 15 public informational meetings. Table 2.2.1-6 below lists all the transportation projects reviewed by County staff during this reporting period.

On September 14, 1998, the Transportation Planning Council of the Metropolitan Planning Organization passed and approved Resolution No. 38-98 requesting that the Florida Department of Transportation, the Miami-Dade County Public Works Department and the Miami-Dade Transit Agency issue early coordination and advance notification to the Bicycle/Pedestrian Program Office (BPPO), the Department of Environmental Resources Management (DERM), and Department of Planning and Zoning (DP&Z) to ensure that timely and appropriate input is realized at the initial stages of transportation related project development. Since 1998, DP&Z, BPPO and DERM staff has reviewed a total of 11 County transportation related projects.

In conclusion, this objective has been implemented through the MPO transportation planning and programming process and the Advance Notification review process. The objective continues to be relevant and, therefore, should be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained.

Table 2.2.1-6
Advance Notifications Reviewed 1995 - 2003

Year	Project Description	State/County
1995	SR 90/ Tamiami Trail from 152 Ave to SW 127 Ave	FDOT
1995	SR 90/ SW 8 Street /Tamiami Trail from SR 826 to SW 27 Ave	FDOT
1995	SR 970 - I-95 Downtown Distribution Ranges	FDOT
1995	Sunset Drive Bridge West 29 Street Bridge	FDOT
1996	In-Kind Replacement of Daytona Rd. Bridge & Cleveland Rd Bridge	FDOT
1996	Homestead Ext of the FL Turnpike from SR 836 to I-75	FDOT
1996	SR 836/ NW 57 Ave from Okeechobee Rd to NW 138 Street	FDOT
1996	US 1 Exclusive Bus Lane Project from SW 112 Ave to SW 344 Street	FDOT
1996	NW 74 Street from SR 826 to NW 57 Avenue	FDOT
1996	NW 25 Street from 67 Ave to NW 87 Ave	FDOT
1996	NW 36/41 Street from NW 107 Ave to HEFT	County
1997	SR 985 (SW 107 Ave) - Intersection Improvements	FDOT
1997	SR 985 (NW 107 Ave) SR 836 to Flagler Street	FDOT
1997	HEFT/ 12 Street Interchange	FDOT
1997	NW 54 Street Bridge Rehab/ E 1st Ave Bridge Rehab	FDOT
1997	Krome Ave (SR 997) Access Mgmt./Action Plan Okeechobee Rd to US 1	FDOT
1997	SR 933/ NW 12 Avenue Bridge Replacement	FDOT
1997	Biscayne Blvd NE 39 Street to NE 123 Street	FDOT
1997	Replacement of Bridge #876704 @ Meridian Ave over Collins Canal	FDOT
1998	SW 112 Ave / Allapattah Rd Ext. PD&E Study	FDOT
1998	Replacement of Robert King High Bridge over Tamiami Canal	FDOT
1998	NW 122 St. from Okeechobee Rd. to NW 87 Ave.	County
1999	Interstate I-95 Improvements PD&E	FDOT
1999	Verona Ave Bridge Replacement over Grand Canal	FDOT
1999	SR 977/ Krome Ave./ SW 177 Ave. from SW 296 St. to US 1 & Truck By-pass	FDOT
1999	New Road Construction NW 87 Ave from NW 58 Street to Okeechobee Rd	FDOT
1999	NW 12 St. from NW 137 Ave. to NW 127 Ave.	County
1999	NW 137 Ave. from NW 12 St. to SW 8 St.	County
1999	SW 184 St. from SW 147 Ave. to SW 127 Ave.	County
1999	W 24 Ave. from W 76 St. to W 52 St.	County
1999	W 76 St. from W 36 Ave. to W 20 Ave.	County
1999	Pine Tree Dr. Bridge over Collins Canal	County
2000	Port of Miami "U" Turn Roadway at SR 886/ Port Blvd	FDOT
2000	SW 97 Ave. from SW 72 Ave. to SW 40 St.	County
2000	NW 110 Ave. from NW 25 St. to NW 14 St.	County
2001	HEFT/ SR 874 (PD&E) from SW 211 St to SR 874	FDOT
2001	Florida Official Transportation Plan	FDOT
2001	NE 2 Ave. from NE 115 St. to NE 91 St.	County
2001	Flagler St. from NW 2 Ave. to Biscayne Blvd.	County
2002	I-95/ NW 8 St New Access ramp to Westbound SR 836	FDOT
2002	SR 7/US 441/ NW 5 St Bridge #870659 over the Miami River	FDOT
2002	NW 14 St: New Access ramps at I-95	FDOT
2002	SR 9336 (Ingraham Hwy) Improvements	FDOT
2003	DuPont Plaza Circulation (PD&E)	City of Mia

Source: Miami-Dade County Department of Planning and Zoning, May 2003.

Objective 6

Plan and develop a transportation system that preserves environmentally sensitive areas, conserves energy and natural resources and promotes community aesthetic values.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

- Number of transportation demand management (TDM) and transportation system management (TSM) programs implemented;
- Number of environmental reviews conducted for roadway construction and reconstruction projects; and
- Number of arterial landscaping improvements completed.

Objective Achievement Analysis. This objective has been implemented through the various types of reviews required during the planning and development of transportation improvements. Concerns regarding the environment, natural resources and aesthetics are addressed through the Florida State Clearinghouse Advance Notification process for all Federal and State-funded transportation projects; the Miami-Dade County Department of Environmental Resources Management (DERM) review process; the CTAC and TARC review processes; the Miami-Dade Bicycle/Pedestrian Advisory Committee; and the MPO public hearing process. Also, FDOT, in consultation with the Federal Highway Administration, determine what degree of environmental documentation is necessary to determine the type of environmental evaluation for transportation projects. FDOT completed three Environmental Impact Statements (EISs) since 1995. They were for the East-West Multimodal Corridor, the Miami Intermodal Center and the Port of Miami Tunnel. EIS is the highest level of environmental assessment.

Miami-Dade County Public Works Department also makes determination on the type of environmental evaluation a transportation project requires based upon in-house environmental evaluations, comments received through coordination with other County agencies and public hearings. During the design of transportation projects, DERM as well as the aforementioned committees require buffer zones and landscaping, where feasible and necessary, in order to promote community aesthetics values.

As discussed under the monitoring measure section of Objective 1, the County is implementing TDM and TSM programs to reduce the overall peak-hour demand and use of single occupant vehicles (SOV). Policy 1F of this subelement outlines the type of strategies employed in Miami-Dade County. Presently, there are three transportation management associations for Miami Beach, Airport-West and Downtown Miami. Employer-based subsidies exist for transit riders; including discount programs for certain groups on transit systems. In addition, the County has successfully implemented a vanpooling program in January 1998. There are currently 57 vanpools in place. The South Florida Vanpool Program, a joint effort between the Florida Department of Transportation, the MPO, the South Florida Commuter Service, provides vans to individuals traveling together on a regular basis to work. The program is also accessible to institutions, businesses, agencies and other organizations in the South Florida Region. Park-and-ride lots are also provided at key locations along major corridors served with prime transit

service such as the Metrorial and exclusive Busway corridor as well as high-occupancy vehicle lanes in place on Interstate 95. It is clear, however, that much more needs to be done.

In conclusion, this objective is being implemented, remains relevant and should be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. All seven policies under this objective were reviewed for continued relevance. Since all policies are directive in nature and continue to be relevant, they should be retained.

Objective 7

Miami-Dade County's Traffic Circulation Subelement, and the plans and programs of the State, region and local jurisdictions, will continue to be coordinated.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Quantify the number of reviews completed on various plans and programs of FDOT, MPO and where appropriate, adjacent counties; and annually verify the consistency of programmed improvements for implementation in the TIP with the CDMP.

Objective Achievement Analysis. TIP is revised annually and the LRTP has been updated twice since 1995, in May 1999 and December 2001. A representative of the Miami-Dade County Department of Planning and Zoning participated in the revisions and update process. Changes in the TIP and the LRTP need to be reflected in the CDMP. The 2025 LRTP can be considered a refinement and enhancement of the previous update of the Plan (The Year 2020 Plan), which was adopted in May 1999. This update resulted in a complete reassessment of the future capital and operational needs for the County's multimodal network and, therefore, the future traffic circulation network included in the Traffic Circulation Subelement of the Transportation Element of the CDM will be adjusted during future plan amendment cycles to reflect the findings of the planning activity, in keeping with the goals, objectives and policies of the CDMP. Furthermore, the County considers CDMP consistency while reviewing FDOT projects and comprehensive plan amendments of other County municipalities or adjacent counties. In addition, all large-scale development projects such Development of Regional Impact (DRI) are reviewed, in coordination with the South Florida Regional Planning Council (SFRPC), for impacts and consistency with the various elements of the CDMP, including the Traffic Circulation Subelement. Since 1988, the County has reviewed three DRIs and commented on approximately 44 municipal plans amendments for consistency, including potential impacts on the County's traffic circulation system.

Annually, the MPO prepares and adopts a TIP as described in an earlier section of this report. All transportation projects programmed in the TIP, including State and County highway projects and projects related to transit, aviation, seaport and non-motorized facilities are reviewed by County staff for consistency with the traffic circulation, mass transit, port and aviation subelements, as well as other elements of the CDMP. In addition, the TIP, LRTP and FDOT's

Five-Year Work Program is reviewed annually for consistency with the CDMP and the MPO's TIP and 2025 LRTP. Any discrepancies between the County's plans and the Work Program are identified and relayed to FDOT.

In conclusion, this objective is implemented, continues to be relevant and should be retained. No changes to the text of this objective are presently recommended.

Policy Relevance. All the policies under this objective were reviewed for continue relevance. Since all the policies are directive in nature and continue to be relevant, they should be retained. The monitoring measure for this Objective should be deleted and replaced by Monitoring Measure listed for Objective 8.

2.2.2 Mass Transit Subelement

The Mass Transit Element was originally one of the eleven elements of the County's Adopted Comprehensive Development Master Plan (CDMP). As a result of the 1995 Evaluation and Appraisal Report (EAR), the element was modified to implement the EAR recommendations and relocated to the newly created Transportation Element upon adoption of the EAR-based amendments to the CDMP on October 10, 1996.

Objective 1

By the year 2005, the mass transit system shall operate at a level of service no lower than the standard contained herein.

CDMP Monitoring Measure. The following is the adopted monitoring measure for this objective:

All areas of Miami-Dade County will be monitored annually to determine transit system compliance with the adopted level-of-service (LOS) standard through the use of Service Planning Guidelines developed by MDT. The most recent estimates of population and work force prepared by the Department of Planning and Zoning will also be used.

Objective Achievement Analysis. Policy 1A of the Mass Transit Subelement establishes the adopted LOS standard for mass transit. The LOS standard requires that all areas within the Urban Development Boundary (UDB) with a combined resident and work force population of more than 10,000 persons per square miles be provided with a minimum peak-hour mass transit service having 60-minute headways and an average route spacing of one mile (provided certain conditions exist). Miami-Dade Transit (MDT) has been charged with the responsibility of reviewing and approving concurrency applications for mass transit levels-of-service as stated in County Ordinance 89-66, Administrative Order 4-85, and Section 33-G of the Miami-Dade County Code. Based on the latest socio-economic information provided to MDT by the Research Division of the Miami-Dade County Department of Planning and Zoning and review of the Metrobus/Metrorail service area, MDT has annually determined that all areas of Miami-Dade County have met or exceeded the adopted LOS standard for Mass Transit. Figure 2.2.2-1,

identifies all Traffic Analysis Districts (TADs) estimated to have a combined population and employment of 10,000 persons per square mile or greater in 1999. And Figure 2.2.2-2 shows the existing 2002 transit routes that maintain the required LOS standard.

In conclusion, the analyses performed by MDT and the information provided in Figures 2.2.2-1 and 2.2.2-2 show that all areas of Miami-Dade County have met or exceeded the adopted LOS standards for mass transit and, therefore, reveal that this objective has been achieved. Since objective continues to be relevant then it will retained. However, it should be pointed out that with the passage on November 5, 2002 of the half-cent sales surtax, a dedicated mass transit source of revenue, staff of the newly created Office of Public Transportation Management (OPTM) has indicated that existing bus routes will be provided with 15-minutes or better peak-hour headways; 30-minutes or better headways during other periods; and 24-hour service in certain major corridors. Therefore, Policy 1A, the minimum LOS standard, should be revised to reflect the proposed new peak-hour headway, and its present planning horizon changed from 2005 to 2007.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained. However, as explained above, Policy 1A should be revised to reflect the newly planned peak-hour headways approved on November 5, 2002 with the passage of the half-cent sales surtax, a dedicated mass transit source of revenue, to fund the People's Transportation Plan. The Plan calls for the provision of 15-minutes or better peak-hour headways, 30-minutes or better headways during other periods, and 24-hour service in certain major corridors. Therefore, this policy should be revised to reflect the planned headway improvements.

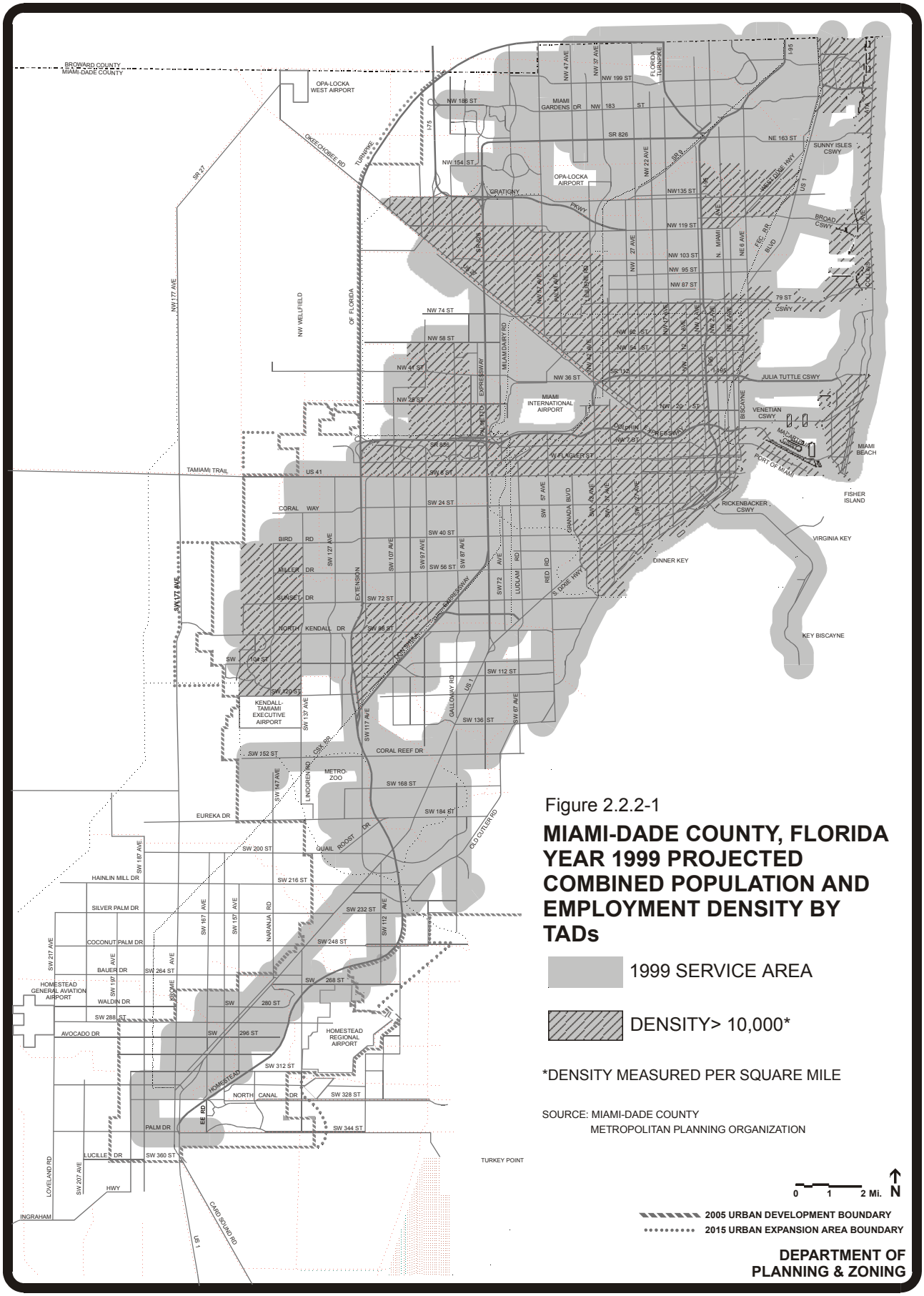


Figure 2.2.2-1

MIAMI-DADE COUNTY, FLORIDA YEAR 1999 PROJECTED COMBINED POPULATION AND EMPLOYMENT DENSITY BY TADs

1999 SERVICE AREA

DENSITY> 10,000*

*DENSITY MEASURED PER SQUARE MILE

SOURCE: MIAMI-DADE COUNTY
METROPOLITAN PLANNING ORGANIZATION

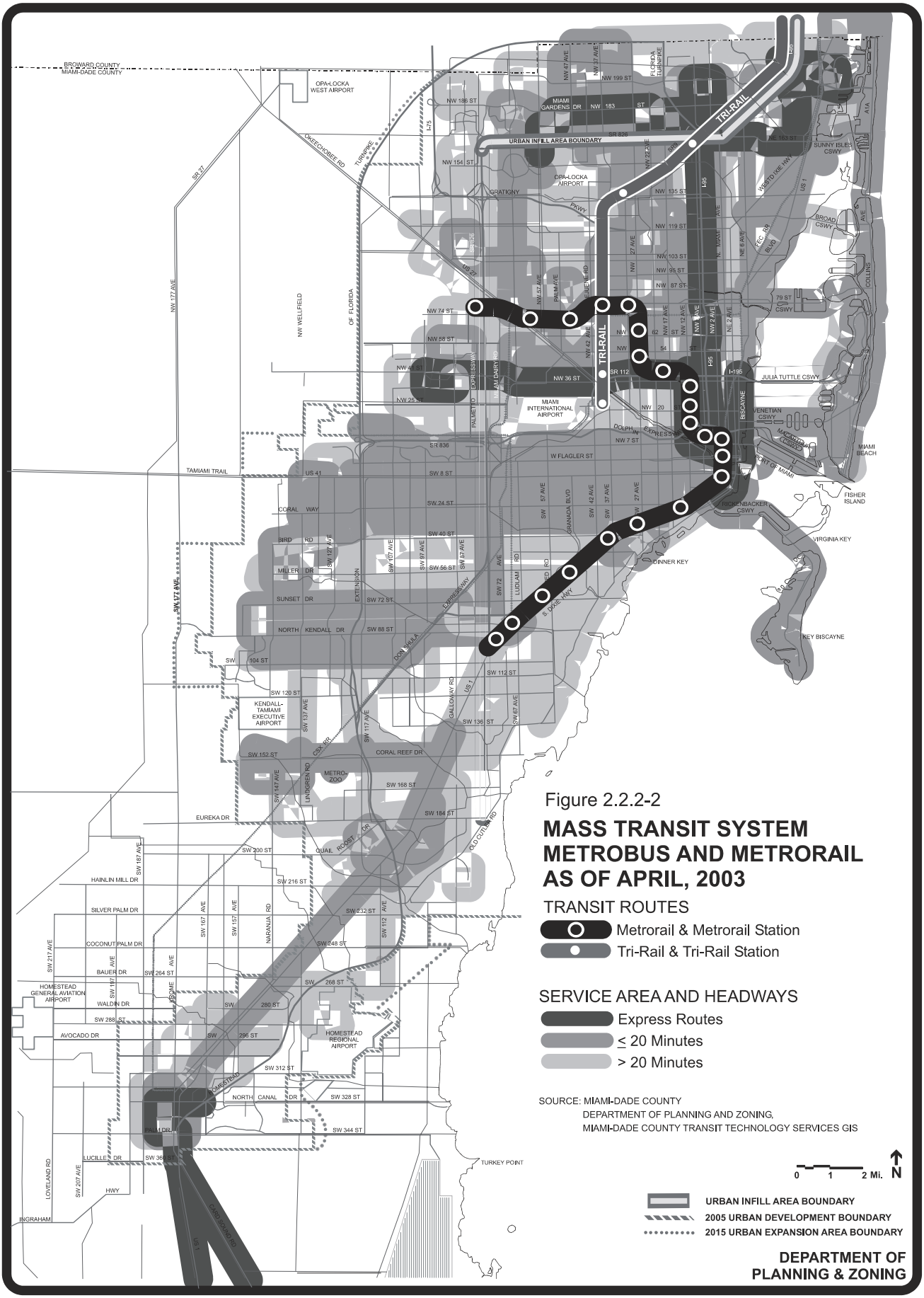
0 1 2 Mi. N

2005 URBAN DEVELOPMENT BOUNDARY

2015 URBAN EXPANSION AREA BOUNDARY

DEPARTMENT OF PLANNING & ZONING

New2/96Revised05/03



New2/96Revised05/03

Objective 2

Coordinate the provision of efficient transit service and facilities with the location and intensity of designated future land use patterns as identified on the Land Use Plan Map, and the goal, objectives and policies of the Land Use Element.

CDMP Monitoring Measures. The adopted monitoring measure for this objective is the same as Objective 1 above, that is, monitoring system compliance with the adopted LOS standard through the use of Service Planning Guidelines developed by MDT and the most recent estimates of population and work force.

Objective Achievement Analysis. Transit service has been coordinated with the locations and intensity of designated future land use patterns as identified on the Adopted 2005 and 2015 Future Land Use Plan Map, and service area extensions are based upon projected population and employment growth, which are derived from the land use categories of the map. Consequently, this objective has been achieved.

Miami-Dade Transit operates four modes of mass transit: Metrobus (a bus service); Metrorail (a heavy rail system); Metromover (an automated guideway system); and Special Transportation Service (a demand responsive service). This integrated multi-modal transit system covers most of the area within the Urban Development Boundary (UDB), approximately 375 square miles, or 75 percent of the entire urbanized area of Dade County.

As of April 2003, the Metrobus system operates a total of ninety Metrobus routes, seven days a week, with two routes providing twenty-four hours a day service in certain corridors, serving the urbanized area of Miami-Dade County, southern Broward County and northern Monroe County. This mode of transit system operates with a total fleet of 969 buses. Since 1995, this system was improved with 23 new bus routes as well as some realignments and route extensions. The new routes, realignments and extensions were made based upon the annual updates based on estimates of population and employment, which were derived from the locations and intensity of designated future land use patterns, and improved transit facilities.

Metrorail, the heavy-rail portion of Miami-Dade County's transit system, provides service to 21 stations on a 21.1-mile line. Construction of the 1.1-mile Metrorail extension, west of the Okeechobee Metrorail station, to an area west of the Palmetto Expressway is currently underway. The new station, the Palmetto Metrorail station, was completed on May 30, 2003.

The Metromover system is a fully automated guideway system. It includes a 1.9-mile inner loop with eight stations servicing the core of Downtown Miami and two extensions, one north to the Omni area and the other south to the Brickell area, adding 2.5 miles of service and 13 stations. No new line extensions have been added to this system since 1995.

In conclusion, progress has been made in achieving this objective and objective remains relevant. Therefore, this objective should be retained and no changes to the text of this objective are presently recommended.

Policy Relevance. All policies under this objective continue to be relevant and should be retained since they are directive in nature.

Objective 3

Provide a sound funding base utilizing public and private sources that will assure maintenance of existing service operations and timely implementation of the needed transportation improvement projects and services.

CDMP Monitoring Measure. The following is the adopted monitoring measure for this objective:

> Monitor the implementation of policies/objectives for the future operations of transit in Miami-Dade County related to service levels, fare structures, ridership projections, financial needs and recommended funding sources.

Objective Achievement Analysis. Miami-Dade Transit has indicated and reported in the yearly Transit Development Programs that the majority of MDT transit services have been funded through a series of grants from Federal, State and local sources, as well as by advertising, passenger fares, joint development, permits, leases and other miscellaneous revenues. However, it is difficult to describe the funding base as being sound when the majority of such funding is provided by the County's general fund and grant sources. However, in November 2002, the citizens of Miami-Dade County approved a half-cent sales tax increase to be the dedicated source of revenue to support transportation improvements. Funds generated by this dedicated source of revenue will be used to improve bus service, rapid transit and major highways and roadways. Bus service improvements will include increases in service miles, operating hours, mid-day, Saturday and Sunday services, and 15-minute headway or better bus service during rush hours and 30-minute headway or better service during other periods. Rapid transit improvements will include construction of up to 88.9 miles of countywide rapid transit lines.

MDT operating expenses exceeded $253 million for fiscal year 2001, an increase of approximately 30% since 1995. Metrobus comprises approximately 64% of the expenses, while Metrorail comprises approximately 23%. County general fund constitutes the largest source of revenues covering approximately 52% of the operating expenses. Direct federal operating assistance has been eliminated after 1997. Other subsidies include the State Operating Assistance, Gas Tax Transfer and U.S. Leverage Lease. Recent trends have indicated the federal government's increasing preference for assisting those transit capital projects with greater state and particularly local financial commitments, thereby, reducing the federal share of discretionary funding. These issues, plus the fact that this is a time when budget cuts are being proposed at all levels of government, underscore the need for more dedicated sources of funding.

In addition to the half-cent sales tax, MDT has been evaluating other alternative sources of revenue, including farebox/faregate, parking, passes/token, advertising permits and leases, joint development, and non-operating revenues. Joint development and special assessment districts are being successfully pursued in several areas. In a joint development proposal, a developer can contribute to construction costs in return for certain rights and the proximity to transit terminals

with promising commercial potential. One special assessment district the Omni/Brickell Special Benefit Zone, was created in 1989 and lasted through 1999. This one zone generated an estimated $35 million in construction financing, which was applied toward the Metromover extension in this area. However, there are limitations in the use of special assessment districts. They are usually constrained to small areas for short-time periods, thus, generating only limited and finite revenues.

In conclusion, progress has been made in achieving this objective. The utilization of public and private sources have supported the provision of mass transit service, and with the passage of the half-cent sales tax a clearly sound funding base has been achieved. However, MDT and OPTM must continue to seek other funding sources to assure maintenance of existing and future service operations and timely implementation of the needed transportation improvement projects and services. The intent of this objective remains relevant and, therefore, this objective should be retained. No changes to the text of this objective are presently recommended.

Policy Relevance. Even though progress has been made in achieving Policy 3A with the adoption of the dedicated source of revenue that will support current and future transit operations, the utilization of parking fees, joint development, and advertising and concession proposals are funding sources that MDT and/or OPTM should continue to seek. Therefore, Policy 3A should be retained but revised to reflect the existing need for other alternative funding sources. Policy 3B, on the other hand, is directive in nature, continues to be relevant and should be retained.

Objective 4

Provide convenient, accessible and affordable mass transit services and facilities.

CDMP Monitoring Measures. The following is the adopted measure for this objective:

MDT will annually update and identify the number and location of transit facilities and types of transit services which provide access to traffic generators such as major centers of employment, commercial, medical, educational, governmental and recreational activity.

Objective Achievement Analysis. Policies 4A through 4C call for the provision of convenient and affordable mass transit service to activity, employment and institutional centers with the assistance of both the private sector and the Florida Department of Transportation (FDOT). Since 1995, these policies have been sufficiently implemented. MDT conducts annual analysis to measure the adequacy of transit services provided to the 32 identified major attractors and trip generators. One or more bus routes currently serve all special attractors, major educational centers, regional retail centers and regional hospitals. Transit service to the Port of Miami was discontinued in November 1994 and reactivated in June 2000. Three of these activity centers, Miami International Airport, Florida International University Park and Dolphin Mall, have bus terminals on site, the rest have on-site service or on adjacent roadways. As stated in the Objective 2 analysis, twenty-three new routes have been established since 1995. Several of these new routes were implemented as a result of the opening of the South Miami-Dade Busway in 1997. These new routes were:

- Route 29 and Zoobus began operations (weekdays only) on November, 1995
- Riverside Shuttle began operations (weekdays only) on February 15, 1996
- Route 6 began operations (weekdays only) on February 12, 1996
- Busway MAX. This new route runs on the Busway along U.S. 1 south of Cutler Ridge Mall, providing limited-stop/express service began operations (seven days a week, from Metrorail south to Homestead and Florida City) in 1997;
- Busway Local. This route serves began operations (between Cutler Ride and Dadeland South Metrorail Station, seven days a week) in 1997;
- Coral Reef MAX. This route provides limited-stop service between Country Walk to Metrorail, seven days a week;
- Saga Bay MAX. This route began operations (limited-stop, weekday rush-hour service only from Sage Bay area to Metrorail) in 1997;
- Bird Road MAX. This route provides weekday only service, limited-stop operations from the West Miami-Dade area (SW 147th Avenue) to Dadeland North Metrorail Station. Operations began in February 2000;
- North Miami-Dade Connection. This route provided circulator services to industrial park areas in North Central Miami-Dade County, as well as a connection to the Golden Glades bus terminal where transfers are afforded to numerous other routes. Operations began in February 2000;
- West Miami-Dade Connection (Route 137). This route provided local bus service, seven days a week, between the Miami International Mall and Cutler Ridge Mall. Operations began in April 2000;
- Doral Connection. This route provides circulator bus service, seven days a week, from the Okeechobee Road Metrorail Station to Miami International Mall. This route may serve as an interim route until the Palmetto Metrorail Station is completed, at which time the service in that region of the County will be upgraded and adjusted. Operations began in April 2000;
- Okeechobee Connection. This route provides a circulator bus service from the Okeechobee Metrorail Station to various employment areas in Medley. Operations began in June 2000;
- Miami-Dade – Monroe Express. This route provides express bus service between the Homestead/Florida City area and Key Largo. Operations began in June 2000;
- Seaport Connection. This route operates seven days a week from the Downtown bus terminal to the Seaport of Miami. Operations began in June 2000;
- Night Owl. This route provides all-night service, seven days a week, circular bus service covering an extensive area encompassing Miami Beach, Downtown Miami, Civic Center, Liberty City, Opa-Locka and North Miami Beach. Operations began in June 2000;

- Airport Circulator. This route connects the Miami International Airport terminal with the airport west cargo areas. Service is provided all-night, seven days a week. Operations began in June 2000;
- Dolphin Mall Shuttle. This route provides a shuttle-type connection between the International Mall and the new Dolphin Mall. Operations began in February 2001, and operates seven days a week;
- Ludlam MAX. This route provides limited-stop service between Miami Gardens Drive and the Okeechobee Metrorail Station. Service is provided during peak hours on weekdays only. Operations began in April 2001;
- Brickell Key Shuttle. This route is a circulator providing shuttle service between the Brickell Metrorail Station and the eastern portion of the Brickell area. Service is provided during weekdays only;
- Coconut Grove Circulator. This route is a circulator providing service between Coconut Grove Metrorail Station and Douglas Road Metrorail Station via SW 27 and 37 Avenues. Service is provided seven days a week every 15 minutes. Operations began in November 2002;
- Little Havana Circulator. This route is a circulator providing service between Downtown Miami and SW 27 Avenue via West Flagler Street and SW 7 and 8 Streets. Service is provided seven days a week every 20 minutes. Operations began in November 2002;
- Coral Way MAX. This route provides limited-stop service between Douglas Road Metrorail Station and West Dade via Coral Way. Service is provided weekday during the morning and evening peak periods at 20-minute headways. Operations began in January 2003;
- Little Haiti Connection. This route provides service between the INS Office at NE 79 Street to NW 36 Street via NE 79 Street and NE 2 Avenue. Service is provided seven days a week every 30 minutes. Operations began in November 2002; and
- Hialeah Gardens Connection. This route provides service between Miami Lakes and Hialeah Gardens to the Palmetto Station via NW 82 and 87 Avenues. Service is provided seven days a week every 30 minutes during the peak hours and 60 minutes during the off-peak hours. Operations began in March 2003.

Other major transit projects implemented during this EAR reporting period include:

- The South Miami-Dade Busway. This state-of-the art alternative transit facility to traffic congestion along the U.S. 1 corridor opened on February 3, 1997. An 8.2-mile roadway facility built to serve as an exclusive facility for Metrobuses (although emergency vehicles may also use it), which extends from the Dadeland South Metrorail Station to Cutler Ridge Mall, a planned Regional Urban Center. As a result of this new facility, several new routes were implemented and others were adjusted per their utilization of the Busway. Park and ride at different locations and transfer to and from Dadeland South Metrorail Station are provided at no cost;

- Palmetto Metrorail Station. This is a 1.1-mile extension of the Metrorail line west of the Okeechobee Metrorail Station to an area west of the Palmetto Expressway (SR 826) and north of N.W. 74th Street, includes: the Metrorail station, a parking lot with 800 parking spaces and nine kiss-and-ride parking spaces. Construction was completed on May 30, 2003; and
- South Miami-Dade Busway Extension. This project represents an 11.5-mile extension to the existing Busway from Cutler Ridge Mall to Florida City (SW 344 Street). The project will include 12 stations and five park-ride facilities located at SW 244th, 264th, 305th, 320th and 344th Street stations. Metrobus routes currently operating along U.S. 1 in this segment will be diverted to the Busway, along with additional transit services. The project is fully funded, and completion is anticipated by 2005.

The 2003 TIP includes many other projects impacting the delivery of transit services. However, they are not under the supervision of MDT. The following is a sample of these projects.

- Miami Intermodal Center (MIC)
- MIC-Miami International Airport (MIA) People Mover Connector
- Tri-Rail Double Tracking
- Golden Glades Intermodal Center

Regarding private sector funding support, MDT undertook an aggressive program of maximizing benefits of various transit real estate properties. On November 1998, MDT issued a request for proposals for the private-public joint partnership in the development of MDT properties at nine selected Metrorail stations. The proposals range from residential to mixed-use projects including residential, retail, hotels, offices, and parking garages.

Policy Relevance. All three policies under this objective continue to be relevant. Since all such policies are directive in nature, they should be retained.

Objective 5

Provide equitable transportation services to all groups in the metropolitan population, including the special transportation needs of the elderly, persons with disabilities, low-income and other transit dependent persons.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

MDT will monitor and compile the necessary data in compliance with the applicable reporting requirements of Title VI Civil Rights, Americans with Disabilities Act of 1990, and Chapter 427, Florida Statutes.

Objective Achievement Analysis. Chapter 427, F.S. and Rule 41-2 establishes and mandates the creation of a coordinated transportation system for the "transportation disadvantaged" in the State of Florida. In Miami-Dade County, Miami-Dade Transit is charged with the responsibility of implementing the program, applying for grants, and coordinating the transportation for the disadvantaged. To support this program, a $1.50 is added to the cost of all vehicular license tags sold in the State, in addition to revenues from parking tickets for illegal parking in handicapped designated spaces. These funds are placed in the Transportation Disadvantaged Trust Fund (TDTF) administered by the Commission for the Transportation Disadvantaged (CTD). Miami-Dade County receives $3.8 million annually from the TDTF. MDT allocates $1 million to be spent on Metropasses and tokens for the disadvantaged, and $2.8 million to offset the cost of paratransit trips for the disabled. The passes and tokens are provided to:

- School children who cannot afford public transportation and not served by the school bus system;
- Economically disadvantaged parents who are mandated to attend counseling and parenting classes;
- Elderly who want to remain active participants in the community, but cannot afford transportation to hot meals sites, physicians, volunteer groups, and social events; and
- Disabled individuals who do not qualify for ADA paratransit.

Other programs such as the Section 5310, Golden Passport, Medicaid Metropass, WAGES Metropass, and STS Free Ride are also included in the Coordinated Transportation System.

MDT provides the necessary information in the Annual Update of the Americans With Disabilities Act (ADA) of 1990 Complementary Paratransit Plan. The document includes a progress report on compliance with the paratransit service criteria. It also provides a five-year demand forecast estimate for paratransit needs, budget cost, vehicle estimates and public participation documentation.

With regard to the promotion of affordable housing development opportunities within the proximity of areas served by mass transit (Policy 5D), MDT through its joint development

program has been implementing this policy by including in its request for proposals the provision of affordable housing. The following proposed joint developments have affordable housing components.

- Dadeland North Metrorail Station - A lease was signed for Phase I, the 320,000 sq. ft. retail component of the joint development opened in October 1996 and an "out parcel" consisting of 48 apartments were completed in January 2000. Phases II and III include the construction of a 25-story, 218-unit apartment building and a 15-story with 8,570 sq. ft. of retail and a 15-sotry, 117-unit apartment tower with 7,000 sq. ft. retail space;
- Coconut Grove Metrorail Station - Development will consist of a 19-story mixed-use transit center with 23,000 sq. ft. of ground retail, 220 residential units and a 611-space parking garage; a 19-story office building with 11,000 sq. ft. of ground floor retail, 157,200 sq. ft. office space, a hotel and additional 500-space parking garage.
- The Santa Clara Apartments. This affordable rental housing development to be located at the Santa Clara Metrorail Station, N.W. 12th Avenue between N.W. 20th and 21st Streets, consists of a nine-story, 208-unit affordable rental apartment development, including one level of parking. Construction began in September 2002. An additional 17-story, 200-unit building, including five levels of parking, is proposed for construction in 2003; and
- Allapattah Garden Apartments. This proposed affordable, rental housing complex to be located at the Allapattah Metrorail Station, N.W. 36th Street and N.W. 12th Avenue, consists of six garden-style, three-story buildings totaling 128 two- and three-bedroom units. Construction began in October 2002.

Overall, a great deal of progress has been made in achieving this objective, and the monitoring measure has been carried out. This objective is still relevant and should be retained.

Policy Relevance. All the policies under this objective continue to be relevant. Since all such policies are directive in nature, they should be retained.

Objective 6

Continue to coordinate Miami-Dade County's Mass Transit Subelement, and the plans and programs of the State, region and local jurisdictions.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

Review and comment, as necessary, on various transit-related plans and programs of the Florida Department of Transportation, the Metropolitan Planning Organization, and where appropriate, adjacent counties. Monitor annually, the status of improvements programmed for implementation in the Transportation Improvement Program (TIP) and Capital Improvement Element (CIE) and improvements identified in the Mass Transit Subelement.

Objective Achievement Analysis. MDT reviews all Federal and State-funded transportation projects during planning and development stages through the State Clearinghouse Advance

Notification process. The Development of Regional Impact (DRI) review process, allows MDT to review and comment on all applications for developments of regional impact. Such a review provides the opportunity to comment on proposed large-scale developments within adjacent counties, as well as those proposed within Miami-Dade County. The Development Impact Committee (DIC) review process also provides MDT the opportunity to review and comment on all applications for development of County impact. MDT continues to coordinate mass transit planning with the plans and programs of the FDOT, the Metropolitan Planning Organization, Tri-Rail, Broward County Transit, and Miami-Dade County Public Works Department and the Department of Planning and Zoning.

As a result of this coordination, MDT operates local Bus Routes K, V and 3 serving the Diplomat Mall area and Route 91 along the County line in southern Broward County. Broward County Transit (BCT) in turn operates local routes, 1, 2, 6, 9, 15 and 18 in northern Miami-Dade County. Also, the Tri-County Commuter Rail Authority (TCRA), which operates the Tri-Rail system, a commuter train that operates along a 71-mile, single-track line providing services to Palm Beach, Broward and Miami-Dade County, serves five stations in Miami-Dade County, including one linking directly to the Tri-Rail Metrorail Station at N.W. 79th Street, in Hialeah. Two stations were added since the initial opening of the Tri-Rail in 1989, the Opa-locka Station in 1996 and the Airport station in 1998.

In conclusion, this objective has been achieved through the required coordination and review processes, and the monitoring measure has been carried out. Since this objective is directive in nature and continues to be relevant, it should be retained.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Since all such policies are directive in nature and continue to have relevance, they should be retained.

Objective 7

Initiate, by 1998, protection strategies for mass transit rights-of-way and exclusive transit corridors.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

MDT will investigate and report on strategies for preserving planned mass transit rights-of-way and exclusive corridors by 1998.

Objective Achievement. No real progress has been made toward achieving this objective. The only effort made so far to investigate strategies for preserving planned mass transit rights-of-way goes back to August 1993, when MPO commissioned the Railroad Rights-of-Way Assessment for the purpose of identifying rail right-of-way segments, their potential future uses and investigating methods for preservation. However, Miami-Dade County has adopted strategies for roadway rights-of-ways, which are or will be used by MDT's bus fleet. The County through the provisions of Section 33-133, Right-of-way Plan and Minimum Width of Streets and Ways,

of the Code of Miami-Dade County, preserves the minimum right-of-way widths for streets, roads and public ways for the unincorporated area of the County. Also, the Public Works Manual sets forth minimum requirements governing public and private roadway construction. Enforcement of the manual implements the minimum roadway right-of-way requirements established in the code.

In conclusion, little progress has been made in achieving this objective, but since this objective remains relevant, it will be retained. However, since MDT has not investigated strategies to protect future mass transit rights-of-way, the planning horizon of this objective should be changed to the year 2007.

Policy Relevance. All policies under this objective are directive in nature and continue to be relevant. Therefore, all the policies should be retained.

Objective 8

Encourage ease of transfer between mass transit and all other modes, where it improves the functioning of the transportation network.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

MDT will provide an annual listing of improvements made during the previous year to the park and ride lots and garages; bicycle lockers and racks; pedestrian walkways; taxi and jitney stands; that are incorporated as part of transit facilitates. In the course of reviewing highway improvements projects, comments will be made related to the provision of bus turnout bays, bus shelters, HOV lanes, and other associated facilities to accommodate mass transit.

Objective Achievement. The information requested in this monitoring measure was not collected and reported annually. However, information provided in MDT's yearly Transit Development Programs from 1994 to 2002 was used to assess this objective. In 1994, Miami-Dade Transit had 12,397 parking spaces available. Presently, MDT has 9,702 park-ride spaces available, including Metrobus park-ride lots and Metrorail station lots and parking garages. The loss of approximately 22% of the parking spaces was due to the development and redevelopment of some the parking lots adjacent to the Metrorail stations. However, it should be pointed out that the average parking spaces utilized on any given weekday was 5,621 in 1994 and 6,646 in 2001. This represents an increase in utilization rate of 18.2% and indicates that the primary objective in the provision of park-ride facilities, which is to provide users with a convenient means of transit access and usage in terms of time, cost and safety, is inducing a higher demand in transit service. Table 2.2.2-1 shows the number of parking spaces provided for Metrobus and Metrorail.

With regard to the planning and design of rapid transit sites and stations and transit centers, MDT has given priority to the provision of safe, attractive and comfortable environment for pedestrian and transit users. The Palmetto Metrorail Station includes the Metrorail station, a parking lot with 800 parking spaces and nine kiss-and-ride parking spaces. The South Miami-

Dade Busway Extension project, currently under construction, will include 12 stations and five park-ride facilities located at SW 244th, 264th, 305th, 320th and 344th Street stations.

Highway improvement projects are reviewed through the State Clearinghouse Advance Notification process for FDOT projects. In this type of review, MDT provides input on the provision of appropriate transit features during the design stages of state highway improvements.

In conclusion, progress has been made in achieving this objective, and objective remains relevant. Therefore, the objective should be retained and no changes to its text are presently recommended.

Policy Relevance. All the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective should be retained.

Table 2.2.2-1
Mass Transit
Active Park and Ride Facilities in 1994 and 2002

FACILITIES EXISTING 1994	No. of SPACES 1994	FACILITIES EXISTING 2002	No. SPACES 2001
		Metrobus	
Golden Glades	1,350	Golden Glades	1,350
Hammocks Town Center	100	Hammocks Town Center	50
West Lakes Plaza	50	West Lakes Plaza	--
MDCC South Campus	25	MDCC South Campus	25
SW 72 St./SW 88 Ave.	77	SW 72 St/SW88 Ave	--
Coral Reef (SW 117 Ave./SW 152 St	115	Coral Reef (SW 117 Ave./SW 152 St	115
Sunset Strip/132 Ave	25	Sunset Strip/132 Ave	30
Kendall Hammocks	25	Kendall Hammocks	--
SW 152nd Street	--	SW 152nd Street	91
Cutler Ridge Busway Station	--	Cutler Ridge Busway Station	50
Sub-total	1,767		1,711
Metrorail			
Dadeland South	1,280	Dadeland South	1,284
Dadeland North	1,900	Dadeland North	1,973
South Miami	1,799	South Miami	1,738
University	317	University	195
Douglas Road	444	Douglas Road	190
Coconut Grove	216	Coconut Grove	199
Vizcaya	109	Vizcaya	91
Overtown	34	Overtown	35
Culmer	89	Culmer	--
Santa Clara	198	Santa Clara	104
Allapattah	83	Allapattah	66
Earlington Heights	1,016	Earlington Heights	93
Brownsville	440	Brownsville	428
Dr. Martin L. King Jr. Plaza	1,019	Dr. Martin L. King Jr. Plaza	--
Northside	315	Northside	294
Hialeah	333	Hialeah	315
Okeechobee	1,038	Okeechobee	986
Sub-total	10,630		7,991
Total	12,397		9,702

Source: Miami-Dade Transit's 1994 and 2002 Transit Development Programs.

2.2.3 Aviation Subelement

The Aviation Subelement was originally part of the Port and Aviation Facilities Element of the County's Adopted Comprehensive Development Master Plan (CDMP). As a result of the 1995 Evaluation and Appraisal Report (EAR), new requirements of State planning law and changes needed to update the CDMP, the subelement was modified to implement the recommendations of the County's adopted EAR and proposed for relocation to the then proposed new Transportation Element. Modifications to the subelement and its relocation to the Transportation Element were adopted on October 10, 1996.

The Miami-Dade County Aviation system consist of the following facilities: Miami International Airport (MIA) – the major air carrier facility in the region, Opa-locka (OPF) and Kendall-Tamiami Executive (TMB) Airports, Homestead General, Opa-Locka West, and Miami-Dade-Collier Training and Transition Airports. The Miami-Dade County Aviation Department (MDAD) operates and maintains all these facilities. There is another aviation facility in South Miami-Dade County, the Homestead Air Reserve Base (Base), former Homestead Air Force Base. The Base is still under the jurisdiction of the U.S. Department of Defense. There are other minor aviation facilities in Miami-Dade County that because of their nature are not given further consideration in the subelement. These aviation facilities are privately owned airstrips, gliderports, heliports, helistops, seaplane bases and STOL aircraft ports. For the purpose of this evaluation only those facilities operated and maintained by MDAD are considered.

Objective 1

Provide facilities necessary to accommodate forecast aviation demand and minimize delay.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Annual enplanement[1], cargo tonnage and operational[2] levels at air carrier facilities.
- Annual operational levels at general aviation airports.
- Facility improvements at air carrier facility(ies).
- Facility improvements at general aviation and training and transition facilities.

Objective Achievement Analysis. The MDAD monitors the number of passengers, cargo, and operations on an annual basis for each one of the County's aviation facilities. Table 2.2.3-1 below shows the recorded passenger, cargo and operation volumes per year for MIA since 1995. As the table below shows, MIA accommodated over 33 million passengers in 1995 and over 34 million passengers in 1997, representing an increase of approximately 3.9% during that period. However, since 1998, MIA has been experiencing a steady decrease in passenger volumes. In 1998, MIA accommodated over 33.9 million passengers and over 30 million in 2002, a decrease of 11.5%. This decrease in enplanement is the result of the broad national economic downturn

[1] Airplane boardings.
[2] Airplane take-offs and landings.

that the nation has been experiencing in the past few years, specially after the disastrous event of September 11, 2001.

Table 2.2.3-1
Miami International Airport
Air Carrier, Cargo and Operations – Years 1995 - 2002

Year	Passengers	% Growth	Cargo (Tons)	% Growth	Operations	% Growth
1995	33,235,658		1,747,170		576,936	
1996	33,504,579	0.9	1,855,232	6.2	534,775	-7.3
1997	34,533,268	3.0	1,946,841	4.9	533,084	-0.3
1998	33,935,491	-1.7	1,976,857	1.5	536,262	0.6
1999	33,899,332	-0.1	1,820,384	-7.9	519,861	-3.1
2000	33,621,273	-0.8	1,811,184	-0.5	517,440	-0.5
2001	31,668,450	-5.8	1,807,894	-0.2	471,008	-9.0
2002	30,060,241	-5.1	1,790,784	-0.9	446,235	-5.3

Source: Miami-Dade County Aviation Department and Department of Planning and Zoning, April 2003.

The table also shows the cargo tonnage handled by MIA during the period from 1995 to 2002. Despite the broad national economic downturn experienced in the last few years, MIA has averaged an annual growth of approximately 0.36% in its cargo tonnage during this reporting period, with the highest increase (6.2%) occurring in 1996 and the greatest decrease (-7.9%) occurring in 1999. Also, operations at MIA have declined during this reporting period. Take-offs and landings have declined from 576,936 in 1995 to 446,235 in 2002, a decrease of approximately 22.7%, with the greatest decline (-9.0%) occurring in 2001.

In general, these declines in passenger, cargo and operation volumes at MIA are consistent with national trends. It should be noted, that 2000 total passenger figures (over 33 millions) were below the forecasted levels (40 millions) included in Policy 1A of the adopted Aviation Subelement. However, despite these decreases in passenger, cargo and operation volumes, MDAD continues to improve the aviation system capacity through the development of facilities and operational improvements to make MIA more competitive and to meet future forecasts. Aviation Department staff has recently revised the passenger and operation forecast levels and adjusted the capital improvements schedule to meet the revised forecast levels of air carrier activities. For instance, the 40 million-enplanement levels for MIA, which was forecast to occur in between 1998 and 2004, is now expected to occur between 2010 and 2015.

Table 2.2.3-2 below shows the total number of operations at the County's general aviation facilities. Each of these facilities listed in Table 2.2.3-2 is unique and caters to different sectors of the aviation business. Opa-Locka and Kendall-Tamiami Executive Airports are the County's primary corporate aviation facilities. Homestead General, Opa-Locka West and Miami-Dade-Collier Airports are flight-training facilities. The figures in Table 2.2.3-2 show fluctuations that are typical of these types of facilities in the country. It should also be noted that the 2002 total operations figure at general aviation facilities is considerably lower than the forecasted figures included in Policy 1B of the adopted Aviation Subelement.

Table 2.2.3-2
General Aviation Airports
Total Operations for Years 1995 - 2002

Aviation Facility	1995	1996	1997	1998	1999	2000	2001	2002
Opa-Locka	181,714	145,502	117,950	109,343	117,626	147,894	149,813	151,353
% Change		-19.9%	-18.9%	-7.3%	7.6%	25.7%	1.3%	1.03%
Kendall-Tamiami Executive	196,290	165,851	178,071	193,166	210,442	194,300	184,737	174,206
% Change		-15.5%	7.4%	8.5%	8.9%	-7.7%	-4.9%	-5.7%
Homestead General	40,000	45,000	55,876	56,776	62,852	62,314	72,140	71,561
% Change		12.5%	24.2%	1.6%	10.7%	-0.9%	15.8%	-0.8%
Opa-Locka West	80,000	60,000	40,000	16,000	16,000	16,000	14,000	14,000
% Change		-25.0%	-33.3%	-0.0%	0.0%	0.0%	-12.5%	0.0%
Dade-Collier Training& Transition	21,678	25,612	17,360	14,044	18,760	23,796	14,468	9,992
% Change		18.1%	-32%	-19.1%	33.6%	26.8%	-39.2%	-30.9%
Total Traffic	519,682	441,965	409,257	389,329	425,680	444,304	435,158	421,112
% Change		-15.03%	-7.4%	-4.9%	9.3%	4.4%	-2.1%	-3.2%

Source: Miami-Dade Aviation Department and Department of Planning and Zoning, May 2003.

MDAD has a large ongoing capital improvements program. It is aimed at the renovation of existing and construction of new facilities to meet current and forecasted passenger, cargo and general aviation demand at County airports, especially the MIA. Almost $3 billion were planned to be expended over the 1995-2000 programmed period for construction of ground transportation improvements, cargo areas, terminals and navigation and runway improvements. An updated Aviation System Master Plan completed in 1994 provided the footprint for these capital investments. To this effect, the County completed during this reporting period the following improvements:

- Concourse A Phase, completed in 1995;
- Apron and utilities modifications on expansions at Concourses A, E and H (1995);
- Electrical system upgrades completed at MIA and Kendall-Tamiami Airport (1995);
- Extended Runway 12-30 along with other airfield improvements at Opa-Locka Airport (1995);
- Custom Expansion Phase I at MIA (1995);
- Terminal and Concourse C Bag sortation at MIA (1997);
- Cargo facilities at MIA (1998);
- Parking Garage 7 at MIA (1998);
- New customs building and land acquisition at Opa-Locka Airport (1998);
- Terminal expansion - Concourse F improvements at MIA (1998);
- Customs and Administration buildings at Kendall-Tamiami Airport (1999);
- Hangar at Opa-Locka Airport (2002);
- Tank Farm enhancement at MIA; and
- Concourse H at MIA (2002).

MDAD is also working on the new air carrier runway at MIA to be located north of the existing runway 9L-27R. This major undertaking will allow MIA to minimize airport delay.

The 1995 EAR-based amendments to the CDMP included a list of aviation facilities improvements to be completed within two planning horizons (1996-2000 and 2001-2015). These improvements and their current status are shown in Table 2.2.3-3 below. As shown in the table, the County has completed most of the cargo-related work at MIA. The new state-of-the-arts cargo facilities have helped MIA to retain its status as the cargo gateway to the Americas. Future improvements and expansions of passenger facilities at MIA continue to be crucial if the airport is going to retain its leading role in the region.

At Opa-Locka Airport, the County has completed a series of key projects including the executive terminal and apron, navigational aids, and airfield electrical improvements. As shown in Table 2.2.3-3, all projects listed in the Subelement's Future Aviation Facilities Section for Kendall-Tamiami Executive Airport have been completed. Hurricane Andrew heavily impacted this facility in 1992 and it was in dire need of a major overhaul. Also shown in Table 2.2.3-3 are the improvements completed at Homestead General Airport.

Table 2.2.3-3
Miami International Airport
Aviation Facility Improvements Since 1995

Project	Need	Status
Runway/Taxiway		
Midfield Area Development	Deficiency	Underway
Runway Clear Zone Land Acquisition	Deficiency	Deferred
Miscellaneous Taxiway Improvements		
Taxiway "S" Extension	Growth	Deferred
Air Carrier Runway Addition	Deficiency	Underway
Navigational Aids (NAVAIDS) Improvements	Deficiency	Underway
	Terminal/Apron	
NW 36th Street Apron Improvement	Deficiency	Underway
Terminal Expansion-North Phase III	Deficiency	Underway
Terminal Expansion-South		
Phase I	Growth	Underway
Phase II	Growth	Underway
Terminal Expansion-Concourse A Phase II	Growth	Completed
Terminal Expansion-Concourse F		
Concourse F Improvements-Phase III	Deficiency	Deferred
Concourse H		
Terminal Expansion	Growth	Completed
Concourse H Improvements	Deficiency	Completed
Miscellaneous Terminal Improvements		
Terminal D-E-F Wrap	Deficiency	Deferred
Commuter Terminal South	Deficiency	Deferred
Concourse A/D Expansion	Growth	Underway
Concourse E Satellite Extension	Growth	Deferred
Parking Garage 7	Deficiency	Completed
Terminal Expansion-Concourse J	Growth	Underway
Life Safety Improvements	Deficiency	Underway
	Other Improvements	
	Cargo Facilities	
Cargo Building 2205 (706)	Growth	Completed
Cargo Building 2207 and Apron (707)	Growth	Completed
Cargo Building N805 and Apron (708)	Growth	Completed
Cargo Building N829 and Apron (709)	Growth	Completed
Cargo Building 2222, 2224, 2226 and Apron (710)	Growth	Completed
Cargo Building 2216, 2218,2220 and Apron (711)	Growth	Completed
Ground Transportation Improvements	Deficiency	Deferred
Employee Parking Improvements		
Phase I	Deficiency	Completed
Phase II	Deficiency	Deferred
Corrosion Control Facility	Growth	Long Term
Noise Barrier Wall	Deficiency	Completed

Source: Miami-Dade County Aviation Department and Department of Planning and Zoning, May 2003.

Table 2.2.3-3 (Cont.)
General Aviation
Facility Improvements Since 1995

Project	Need	Status
Opa-Locka Airport		
Runway/Taxiway/Apron		
NAVAIDS Addition	Deficiency	Completed
Airfield Electrical Improvements	Deficiency	Completed
Other Improvements		
Airport Area Development	Growth	Underway
Access and Patrol Roads Construction	Growth	Deferred
Executive Terminal and Apron Construction	Growth	Completed
Replacement Buildings	Deficiency	Deferred
Kendall-Tamiami Executive Airport		
Runway/Taxiway/Apron		
Executive Terminal and Apron	Growth	Completed
Taxiway Improvement	Deficiency	Completed
Apron Improvement	Deficiency	Completed
NAVAIDS Addition	Growth	Completed
Other Improvements		
Fuel Farm Construction	Growth	Completed
Access and Service Roads	Growth	Completed
T-Hanger Construction	Growth	Completed
Heliport Facility Construction	Deficiency	Completed
Customs and Administration Buildings	Deficiency	Completed
Construction of Replacement Facilities	Deficiency	Completed
Homestead General Airport		
Runway/Taxiway/Apron		
New Runway Land Acquisition and Development	Growth	Long Term
Control Tower	Growth	Long Term
Executive Terminal	Growth	Long Term
Other Improvements		
Storage Facility Construction	Growth	Long Term
NAVAIDS Addition	Growth	Long Term
Fuel Farm Construction	Growth	Long Term
Access Road Construction	Growth	Completed
Construction of Replacement Facilities	Growth	Completed
Other Facilities		
Helicopter (Including Downtown) Construction	Growth	Long Term

Source: Miami-Dade County Aviation Department and Department of Planning and Zoning, May 2003.

In conclusion, this objective has been achieved, remains relevant and should be retained. However, MDAD staff is requesting that the text of this objective should be changed from "…minimize delay" to "…optimize level of service". No other changes to this objective are presently recommended.

Policy Relevance. Policies under this objective continue to be relevant and should be retained. However, Policies 1A and 1B should be amended to change the newly revised forecasts for MIA's passenger numbers and for general aviation facilities' operations, respectively. Also, Policy 1C calls for the preparation of a heliports system plan, but since the plan has been prepared MDAD staff is requesting changing the policy to require implementation of the plan.

Objective 2

Maintain and enhance the role of each airport in the aviation system.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

Consistency of implemented role with the roles defined in this Subelement.

Objective Achievement Analysis. The County has taken all the initiatives needed to make sure that its aviation facilities are developed consistent with the functional classifications indicated in the policies under this objective. MIA continues to be the County's commercial service airport and major international hub. Facilities at Opa-Locka and Kendall-Tamiami Executive Airports have been enhanced to handle most of the business jet and general aviation traffic in the County. Homestead General, Opa-Locka West and Miami-Dade-Collier Training and Transition Airport are now considered as flight training airports. The reuse of the Homestead Air Reserve Base (HARB) as "Homestead Regional Airport" has not occurred, as the Department of Defense issued on January 15, 2001, a Second Supplemental Record of Decision (SSROD) on the subject of the reuse of the former Homestead Air Force Base land declared surplus by the Federal government. The SSROD disapproved the previously approved use of the land for commercial aviation purposes and reduced the amount of land available for redevelopment. The SSROD also authorized the transfer of the airfield to the Department of Air Force to be operated as part of the Homestead Air Reserve Base. The SSROD also provided for the County, acting as the Local Redevelopment Agency (LRA) to be the first in line to receive the property through an Economic Development Conveyance (EDC) provided it could prepare a new reuse plan consistent with the SSROD. On December 2001, the Board of County Commissioners adopted by resolution The Homestead Air Base Reuse Plan and authorized the County Manager to submit to the Department of Defense the Homestead Air Reserve Base Economic Development Conveyance application.

In conclusion, this objective has been achieved, continues to be relevant and should be retained. No changes to the text of this objective are presently recommended.

Policy Relevance. The policies under this objective define the roles of the different aviation facilities in Miami-Dade County. A system of airports, such as Miami-Dade County's, in their

present roles will not be as effective in handling anticipated future demand without some flexibility in the refinement of their respective evolving roles in the system. Therefore, Policies 2A, 2B and 2C should be revised to reflect the updated roles of each of the following facilities:

Facility	Updated Role
Opa-Locka Airport	Corporate aviation
Kendall-Tamiami Executive Airport	Corporate aviation
Homestead General Airport	Flight training
Opa-Locka West Airport	Flight training
Dade Collier Training Airport	Flight training
Homestead Air Reserve Base	Military aviation

Objective 3

Minimize air space interactions and obstructions to assure the safety of aviation users and operators and the residents of Miami-Dade County.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Number of structures penetrating the County's navigable airspace permitted since the latest EAR.

Objective Achievement Analysis. Miami-Dade County Aviation Department staff has indicated that no structure has been erected since 1995 that penetrates the navigable airspace. The Federal Aviation Administration (FAA), the Federal Communications Commission (FCC), Chapter 333, Florida Status, and the local airport zoning ordinances control airspace interactions and obstructions in and around airports. Local airport height zoning ordinances have been adopted for Miami International, Opa-Locka, Kendall-Tamiami Executive and Homestead General Airports. These ordinances are currently updated.

On July 23, 2002, Miami-Dade County approved and ratified the drawings entitled "Airport Land Use Zoning Map for Kendall-Tamiami Executive Airport and Surrounding Area" and "Airport Height Zoning Area Map for Kendall-Tamiami Executive Airport." Such height and land use limitations are based on horizontal distances from the end of the runways and continuing up to a certain distance as specified in Ordinance 02-169. This Ordinance is based on Federal Aviation Administration (FAA) rules, Florida Department of Transportation (FDOT) guidelines, Florida Statutes (F.S.) and Miami-Dade County Planning and Zoning Department guidelines. The ordinances for Miami International and Opa-Locka Airports are in the process of being amended to provide for land use compatibility in the same fashion as the Kendall-Tamiami Airport ordinance. The County will revise the zoning ordinance for Opa-Locka, Homestead General and Homestead Air Reserve Base to conform to State Statute. Miami-Dade-Collier Training and Transition Airport is located in Collier County, and therefore outside the County's jurisdiction.

On the other hand, the Aviation Department continue to minimize aircraft interactions, delays or circuitous routing through its planning and development efforts in around the airports.

In conclusion, this objective has been achieved and continues to be relevant. MDAD staff is requesting minor changes to the text of this objective to clarify the intention of the objective.

Policy Relevance. All policies under this objective are directive in nature and remain relevant. However, MDAD staff is requesting text changes to Policies 3B and 3C to further clarify the intent of these policies.

Objective 4

Optimize airport utilization by maintaining and operating existing facilities at 80 percent of capacity before major capacity enhancements are provided.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Capacity enhancements at airports operating at demand to average service volume (ASV) ratios greater than 0.8.

Objective Achievement Analysis. In this instance, the listed monitoring measure cannot be used because real volumes were not available for the ratio. Therefore, achievement of this objective is evaluated through a policy implementation assessment.

Policy 4A calls for MDAD to make aviation capacity improvements at existing airports so long as they are cost effective and consistent with other CDMP objectives and policies. This policy applies primarily to MIA, Opa-Locka and Kendall-Tamiami Executive Airports, especially MIA, which is currently operating at or near its existing capacity. As a result of airport site saturation, MDAD has programmed or planned major improvements to relieve congestion. With suitable space for expansion at MIA virtually depleted, the prevailing technique for optimizing capacity involves replacing less efficient facilities with more efficient ones. For example, all the cargo improvements, terminal expansion and concourse improvements completed at MIA (see Table 2.2.3-3 above) will help to increase the total volume of cargo tonnage that can be handled at MIA. Other improvements completed to alleviate traffic congestion at MIA include the construction of Parking Garage 7 for the public and employee parking facilities.

At Opa-Locka Airport, the improvements made to increase capacity include the construction of the Executive Terminal, airfield electrical improvements and navigational aid improvements.

Kendall-Tamiami Executive Airport had several projects completed since 1995 as this airport was rebuilt as part of the Hurricane Andrew Recovery Program (HARP). These improvements include: completion of the executive terminal, taxiway improvement, navigational aid improvements, t-hanger construction, and customs and administration buildings.

In conclusion, this objective has been achieved, continues to be relevant and, therefore, should be retained. However, MDAD staff is requesting a change to the text of this objective to clarify its intent.

Policy Relevance. The two policies under this objective are directive in nature, continue to be relevant and should be retained. No changes to the text of these policies are presently recommended.

Objective 5

Seek to make capacity of airport access roadways and transit facilities consistent with airport capacity.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Constructed and programmed roadway improvements serving County's aviation facilities since latest EAR.
- Levels of service of airport access roads at date of EAR contrasted with those in 1994.

Objective Achievement Analysis. Roadway capacity enhancement has become a critical issue in Miami-Dade County as vehicular traffic demand continues to grow faster than available funds to make the necessary improvements to meet existing and future traffic demand. In spite of this problem, the State of Florida, Miami-Dade County Public Works and Aviation Departments have made efforts to improve access to the County's major airports. Table 2.2.3-4 below lists all roadway capacity improvements completed in and around the airports since 1995.

These roadway improvements have enhanced the access to MIA, Opa-Locka and Kendall-Tamiami airports as well as the Base.

Table 2.2.3-4
Roadway Improvements Completed
In the Vicinity of County Airports Since 1995

Airport	Project Location	Improvement
Miami International Airport		
NW 36/41 Street	NW 87 Ave. to SR 826	Widened to 6 lanes
SR 836/Dolphin Expwy.	HEFT to I-95	Corridor improvements
NW 7 Street	NW 60 CT to NW 57 Ave.	Widened to 5 lanes
Opa-Locka Airport		
NW 42 Avenue	NW 158 St. to NW 167 St	Reconstructed 3 lanes
NW 47 Ave.	NW 183 St. to SR 826	Widened to 5 lanes
NW 37 Ave.	SR 826 to County Line Rd.	Widened to 5 lanes
Miami Lakes Dr.	SR 826 to NW 57 Ave.	Widened to 4 lanes
NW 151 Street	NW 37 Ave to NW 22 Ave.	Widened to 5 lanes
Kendall-Tamiami Executive Airport		
SW 137 Avenue	SW 152 St. to SW 120 St.	Widened to 6 lanes
	SW 184 St. to 152 St.	Widened to 6 lanes
SW 104 Street	Hammocks Blvd. to SW 137 Ave.	Widened to 6 lanes
SW 120 Street	SW 157 Ave. to SW 150 Ave.	New 2 lanes
	SW 137 Ave. to SW 127 Ave.	Widened to 4 lanes
SW 152 Street	SW 137 Ave. to MetroZoo Entrance	Widen to 6 lanes
	MetroZoo Entrance to HEFT	Widen to 6 lanes
Homestead Air Reserve Base		
SW 137 Avenue	SW 336 St. to SR 821/HEFT	Widened to 4 lanes

Source: Compiled by the Miami-Dade County Department of Planning and Zoning, May 2003.

Table 2.2.3-5 below shows the comparison of level of service for roadways in the vicinity of Miami-Dade's airport facilities. In general, the levels of service of major airports' access roadways have improved since 1995.

A series of on-airport improvements built at MIA since 1995 such as a new parking garage have enhanced traffic circulation at MIA. Moreover, other roadway/circulation improvements are programmed and planned in the vicinity of MIA as a result of the programmed construction of the Miami Intermodal Center (MIC) will help alleviate traffic congestion at the airport. The MIC, east of MIA, is a major multi-modal transportation facility designed to accommodate MIA's car rental facilities and will function as a terminal connecting the airport with Tri-Rail, Metrorail, and Metrobus.

Currently, the FDOT is implementing Phase I (design and construction) of the MIC, which include the terminal, rental car facility, access roadways, MIC/MIA interchange and access improvements, flyover from LeJeune to Okeechobee, utility relocation, etc.

In keeping with the several planning efforts addressing off-airport access improvements, the Miami-Dade Aviation Department continues to hold membership in the Metropolitan Planning Organization's (MPO's) Transportation Plan Technical Advisory Committee and the Transportation Planning Council. It also provides input to the Florida Department of Transportation's (FDOT's) 5-year work program and participates in various transportation working groups including the County's Long Range Transportation Plan.

Table 2.2.3-5
Major Access Roads
1995-2003 Roadway LOS Comparison By Airport

Airport/Roadway	2003 Conditions	2003 TIP*
Miami International Airport		
SR 948/NW 36 Street	Deteriorated	None
NW 25 Street	No change	None
Perimeter Road	Improved	Road widening – MIA Master Plan
SR 836/Dolphin Expwy.	Improved	New 4-lane Express Lanes
SR 826/Palmetto Expwy.	Improved	Roadway widening, 8 to 10 lanes
SR 112/Airport Expwy.	No change	Reconst. SR 112/NW 36/LeJeune Rd. Interchange.
SR 953/NW 42 Avenue	Improved	SR 836–Central Blvd. Interconnector
NW 57 Avenue	Improved	Reconst. SR 836 Interchange
SR 969/NW 72 Avenue	No change	Roadway widening, 2 to 4 lanes
SR 25/Okeechobee Road	Improved	Road widening, 4 to 6 lanes
Opa-Locka Airport		
SR 823/NW 57 Avenue	Improved	Road widening, 4 to 6 lanes
NW 138 Street	Deteriorated	None
SR 924/Gratigny Parkway	No change	None
SR 826/Palmetto Expwy.	Improved	Reconst. NW 57 Ave. Interchange
NW 42/37 Avenue	No change	None
NW 27 Avenue	Improved	None
Kendall-Tamiami Executive Airport		
SR 825/SW 137 Avenue	Improved	Add NB/SB turn lanes at SW 120 St. Roadway widening, 2 & 4 to 6 lanes
SR 821/HEFT	Improved	None
SR 94/SW 88 Street	Improved	Roadway widening, 4 to 6 lanes
SW 104 Street	Improved	Road widening, 4 to 6 lanes
SW 120 Street	No change	New 2-lane roadway
SW 152 Street	Improved	None
Homestead General Airport		
Krome Avenue	No change	Add turn lanes at SW 136, 168, 192 & 272 Streets
Homestead Air Reserve Base		
HEFT	No change	None
SW 137 Avenue	No change	None
SW 112 Avenue	No change	None
SW 268 Street	No change	None
SW 288 Street	No change	None
Opa-Locka West		
Krome Avenue	Deteriorated	None
Okeechobee Road	Improved	None

Source: Miami-Dade Department of Planning and Zoning, May 2003.
Note: * 2003 Transportation Improvement Program, MPO, May 2002.

Transit services in and out of the County's major airport facilities, MIA in particular, have improved significantly since 1995. Among the improvements in the MIA area are a new route, the Airport Circulator, better frequencies of service for the other bus routes, and a Tri-Rail station in the MIC area. A People mover connector between MIA and the MIC is included in the 2003 Transportation Improvement Program and is programmed for construction in 2004.

On November 5, 2002, the qualified electors of Miami-Dade County authorized the County to levy a one-half of one percent discretionary sales surtax to implement the People's Transportation Plan. The Plan, which will be implemented in phases between 2003 and 2031, include bus service improvements, rapid transit improvements and major highway and road

improvements. Proposed rapid transit improvements that will impact aviation facilities include: the East-West Corridor Rapid Transit system, a 17.2-mile corridor, consisting of two segments, one from the Homestead Extension of the Florida Turnpike (HEFT) to the MIC and from the MIC to the Port of Miami; and the Earlington Heights/MIC connector (a 3.1-mile extension) from Earlington Heights Metrorail Station to the MIC. The HEFT to the MIC segment must be re-evaluated before proceeding into the preliminary engineering phase, and the MIC to the Port segment needs to be re-evaluated due to change of alignment and possible change of design. In 2003, the Earlington Heights/MIC connector will proceed to the Final Environmental Impact Statement (FEIS) stage after selection of the Locally Preferred Alternative (LPA), and then proceed to the Planning and Environmental Study phase.

In conclusion, this objective has been successfully achieved, remains relevant and should be retained. Therefore, no changes to the text of this objective are currently recommended.

Policy Relevance. Policies 5A, 5B and 5C remain relevant and should be retained. No changes to these policies are presently recommended.

Objective 6

Maximize compatibility of aviation facilities and operations with the natural environment.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Airport capacity enhancements at locations consistent with the Conservation and Coastal Management Elements of the Comprehensive Development Master Plan.
- Approved Environmental Impact Assessment reports/DRIs required for major facilities and improvements.

Objective Achievement Analysis. Ensuring compatibility between aviation activity and the environment is an on-going activity in Miami-Dade County and one that must be maintained to enable the County to continue to improve its aviation facilities. Many projects at the county operated airports require environmental approval from State, federal, regional and local agencies. The need to balance airport development/expansion with federal, State, regional and local environmental objectives and policies is considered when studying the feasibility of projects. Those projects considered environmentally sensitive undergo environmental reviews by federal, State, regional and local agencies before approval permits are issued. For instance, in June 2000, the County completed a Development of Regional Impact (DRI) pursuant to Section 380.06, F.S., permitting an expansion of the MIA. Said expansion included a new north side parallel air carrier runway, improvements to terminal buildings, air cargo and other aviation facilities. Review of the impacts of the proposed expansion on the natural environment and public services were performed. The DRI for Miami International Airport and subsequent modifications of it have been approved by all reviewing agencies. Environmental impact analyses addressed well field protection, air quality, hazardous waste, storm water management, manatee protection, tree preservation, fuel storage and operating permits. MDAD was granted a development order with a completion date of 2010.

In addition, MDAD has contacted a variety of regulatory agencies, which stipulated procedures and recommendations that must me followed prior to construction of the various projects. These agencies include the following:

- Federal Aviation Administration
- National Environmental Protection Agency
- Federal/State Fish and Game Protection Agency
- Federal/State Parks Department
- Florida Department of Transportation
- South Florida Water Management District
- South Florida Regional Planning Council
- Federal Emergency Management Agency
- Florida Department of Community Affairs
- Florida Department of Environmental Affairs
- Florida Department of Agriculture
- Florida Department of Commerce
- Miami-Dade County Department of Environmental Resource Management.

In addition, MDAD ensures that airport tenants comply with all environmental regulations through inspections, training and enforcement.

In conclusion, this objective has been successfully achieved and continues to be relevant. MDAD continues to ensure that all its aviation facilities, plans and programs are compatible with the natural environment. Therefore, no changes to the text of this objective are presently recommended.

Policy Relevance. This objective's only policy remains relevant and should be retained. No changes to the text of this policy are currently recommended.

Objective 7

Maximize compatibility between airports and the surrounding communities.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Establishment of airport zoning ordinances for all Dade County Aviation Department's facilities by the year 2000.
- Capacity enhancements or operational changes at airports that do not substantially increase the area of residential and institutional use designated on the Land Use Element of the Comprehensive Development Master Plan that are within the calculated day-night average sound level (DNL) 75 noise area.

Objective Achievement Analysis. The issue of airport compatibility with surrounding communities is of major significance for Miami-Dade County. With most of its aviation facilities located within the County's urbanized area, Miami-Dade County has and continues to strive towards this end. Community relations, land use planning, flight track evaluations and zoning are issues which are constantly evaluated to maintain and improve, wherever possible, compatibility between airports and communities.

MDAD continues to implement its "Good Neighbor Policy" aimed at taking responsibility for aircraft-generated noise in the community and working with the Federal Aviation Administration (FAA) to reduce it. To that effect, the County has established the Aircraft Noise and Environmental Planning Office, a Section under the Airside Operations Division of the Aviation Department. The primary purpose of this office is to respond/investigate aircraft noise complaints, perform environmental studies on proposed projects, develop land use compatibility zoning ordinances, provide wildlife mitigation and develop methods to reduce off-airport noise impacts at all County operated airports.

On September 21, 1999, the Miami-Dade County Board of County Commissioners (BCC) adopted Ordinance No. 99-118, the Kendall- Tamiami Executive Airport (TMB) Ordinance, based on Federal Aviation Administration (FAA), Florida Department of Transportation (FDOT), Florida Status and Miami-Dade County Planning and Zoning Department guidelines on establishing land use compatibility zoning regulations around MDAD operated TMB. Utilizing this guidance, MDAD developed zoning criteria for the environs of TMB to insure compatibility with airport operations and activity. On July 13, 2002, the BCC adopted Ordinance No. 02-169 ratifying Airport Land Use and Height Zoning Maps for Kendall-Tamiami Executive Airport. MDAD is currently revising the zoning ordinances for MIA, Opa-Locka and Homestead Airports to conform to state statutes. The land use portion of these ordinances will complement existing height-restriction ordinances.

Also, the area within Miami-Dade County exposed to the calculated day-night average sound level (DNL) of 75 has been reduced due to the elimination of noisier Stage Two aircrafts from airlines' fleets and the introduction of operational changes.

On January 15, 2001, the U.S. Department of Defense issued a Second Supplemental Record of Decision (SSROD) on the subject of the reuse of land declared as surplus by the Federal government as a result of the downsizing of the former Homestead Air Force Base (HAFB). The SSRD disapproved the previously approved use of the land for commercial aviation purposes and reduced the amount of land available for redevelopment. Furthermore, the SSRD authorized transfer of the airfield to the DOD to be operated as part of the Homestead Air Reserve Base. Also, the SSROD also provided for the County, acting as the Local Redevelopment Agency (LRA) to be the first in line to receive the property through an Economic Development Conveyance (EDC) provided it could prepare a new reuse plan consistent with the SSROD. On December 6, 2001, the Miami-Dade County Board of County Commission (BCC) approved Resolution No. R-1377-01 adopting the Homestead Air Reserve Base Reuse Plan and approving the EDC Application. The proposed redevelopment plan comprises educational, recreational, cultural, residential and hospitality uses on 717 acres of land within the former HAFB.

In conclusion, this objective has been successfully achieved, remains relevant and should be retained, as the issue of compatibility of all County's aviation facilities with surrounding communities continues to be of major concern to the County.

Policy Relevance. All policies under this objective remain relevant and should be retained. However, Policy 7A should be revised to reflect the updated role of the Homestead Air Reserve Base, former HAFB.

Objective 8

Maximize support of local and regional economic growth.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Annual airport employment figures.
- Annual aviation-related business employment figures.
- Employment figures in the vicinity of airports at date of EAR contrasted with 1994 by TAZ.

Objective Achievement Analysis. MDAD has provided capacity enhancements in and around its aviation facilities in order to stimulate local and regional economic growth. An example of this effort is the redevelopment and new development that is taking place around MIA's new cargo facilities, on the western areas of MIA. The Airport West Area, as this area is known, has grown into the County's leading industrial and warehousing district.

As shown in Table 2.2.3-6 below, employment in and around the County's major airport facilities has increased since 1990, except for the Homestead Air Reserve Base (HARB. The latter is expected since the former Base was heavily impacted by Hurricane Andrew in 1992 and subsequently realigned. The reuse of the Homestead Air Reserve Base (HARB) has not occurred, as the non-military portion of the Base has not been disposed of by the U.S. Department of Defense as explained in the Objective 2 Achievement Analysis section.

Table 2.2.3-6
Employment by Traffic Analysis Zones (TAZ)
1990 vs. 2002

Facility	1990 TAZ	2000 TAZ	% Change
Miami International Airport	63,093	72,675	15.19%
Opa-Locka Airport	38,736	40,559	4.71%
Kendall-Tamiami Executive Airport	4,955	10,854	119.05%
Homestead General Airport	342	746	118.13%
Homestead Air Reserve Base	9,727	1,373	-85.88%

Source: Miami-Dade Department of Planning and Zoning, May 2003.

In conclusion, this objective has been successfully achieved, remains relevant and should be retained as the issue of economic development continues to be of paramount importance for Miami-Dade County and MDAD.

Policy Relevance. The two policies under this objective remain relevant and should be retained. No changes to the text of these policies are presently recommended.

Objective 9

Maximize flexibility in the operation and expansion of the aviation system.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this Objective:

> Report number of projects provided at the County's aviation facilities, which expand flexibility of landside and airside facilities and operations

Objective Achievement Analysis. Providing flexibility to accommodate the variations in demand and to take advantages of opportunities which may arise is crucial in airport planning, development and management. As reported under Objective 1, the County has completed a series of projects that expand flexibility of landside and airside facilities and operations.

Adopted policies under this objective have been successfully implemented to their practical extent. Flexibility is becoming more difficult at MIA as airport activity and new facilities are constructed/committed on a site that is constrained by its size, airspace, and possible environmental/community constraints. Other policy implementation activities include maintaining terminal use flexibility for use of international gates, baggage claims, and ticket counters at MIA; monitoring development of new aircraft, air traffic control and airport technologies and means to accommodate/exploit their use; and continuing development of innovative financing programs maximizing use of federal and state grant programs, boarding fees, and passenger facility charges and advantageous financial phasing.

MDAD continues to take a leading role in development of new standards for airfield signing systems; use of virtual reality systems in airport facility development, new procedures for air traffic control, and implementing new automated security systems. New, very large aircraft designs, including the Airbus 380, and development and application of new satellite navigation systems are also being closely monitored.

In addition, the new runway scheduled to come on line at MIA this fall will allow for greater flexibility in assigning arrival traffic, as the new runway is designed to be primarily an arrival stream runway.

In conclusion, this objective has been successfully achieved and remains relevant, as flexibility has been provided and maintained at the County's aviation facilities. Flexibility is crucial in air transportation as it continues to be a very dynamic industry and technology.

Policy Relevance. Policies 9A through 9D under this objective continue to be relevant and, therefore, should be retained. However, MDAD staff is requesting changes to Policy 9A to extend its 2015 planning horizon to 2020, and Policy 9B to clarify the use of emerging technology and type of airplanes with larger wingspans.

2.2.4 Port of Miami River Subelement

The Port of Miami River Subelement was originally part of the Port and Aviation Element of the County's Adopted Comprehensive Development Master Plan (CDMP). As a result of the 1995 Evaluation and Appraisal Report (EAR), new requirements of State planning law and changes needed to update the CDMP, the subelement was modified to implement the recommendations of the adopted 1995 EAR and relocated to the then proposed new Transportation Element. Modifications to the subelement and relocation to the Transportation Element were adopted on October 10, 1996.

The material presented in this section of the EAR is limited in scope to the shipping facilities found along the Miami River in central Miami-Dade County. These shipping terminals, that primarily serve shallow draft vessels, were together formally designated as the Port of Miami River in 1986 to meet the regulations of the U. S. Coast Guard. The adopted components of the Port of Miami Subelement include the goal, objectives, policies and monitoring program.

Objective 1

Maintain and promote marine activity on the Miami River and protect these activities from encroachment or displacement by incompatible land uses.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this Objective:

- Indices showing the growth or shrinkage of the amount of river frontage devoted to marine related/dependent business activity shall be prepared biennially.
- Records of land use changes in the vicinity of the Miami River in unincorporated Dade County since 1995.
- Records of zoning changes in the vicinity of the Miami River in unincorporated Dade County since 1995.

Objective Achievement Analysis. No biennial report of indices showing the growth or shrinkage of the amount of river frontage devoted to marine related/dependent business has been prepared since 1995. However, County records show that no CDMP amendments for land use changes and no zoning changes along the unincorporated areas of the Miami River (west of NW 27 Avenue) have been approved since 1995.

In evaluating this objective, it would help to understand the genesis and mission of the Miami River Commission (MRC), the official clearinghouse for all public policy and projects related to the Miami River. In 1997, the Florida legislature created the Miami River Study Commission to identify the main issues impacting the Miami River and to report back recommendations for improving the management of the river. In 1998, the Legislature created the Miami River Commission (MRC) to coordinate state, regional and local activities affecting the River. In April 2000, the Legislature specifically authorized the Commission, the City of Miami and Miami-Dade County to use the recently adopted urban infill statute in the preparation of a multi-

jurisdictional plan for the entire Miami River Corridor. Later in 2000, Miami Dade County entered into a Joint Planning Agreement with the City of Miami for the purpose of designating an urban infill and redevelopment area for the river from the mouth at Biscayne Bay to the Salinity Dam, west of Le Jeune Road. The local governments sought assistance from the MRC to help prepare a plan, the Miami River Corridor Urban Infill Plan (Plan). The Plan was prepared by Kimley-Horn & Associates in June 2002, was adopted by the Miami River Commission as its Strategic Plan on September 9, 2002. Although the Plan has not been officially adopted by any of the local governments, the City and the County have been working to implement its recommendations. One of the recommendations of the Plan addresses the requirements of Policy 1A of the Port of Miami River Subelement, which calls for the establishment of a marine industrial/commercial zoning district along the banks of the Miami River west of NW 27th Avenue. The County's zoning code is currently undergoing a major re-write. The establishment of a protective water-dependent and water related zoning district for the unincorporated area of the Miami River corridor, from NW 20th Street to NW 36th Street and west of NW 27th Avenue, is being explored.

Both the draft Urban Infill Plan and Policy 1C of the Port of Miami River Subelement address the issue of economic vitality of the Miami River. Towards that end, the City of Miami is in the process of commissioning a supplemental economic analysis and a market study of the Miami River corridor to identify commercial activities, appropriate redevelopment strategies, infrastructure needs and funding sources for the Miami River corridor to be incorporated into future Capital Improvement Plans. On March 10, 2003, the City of Miami issued a Request for Proposals for consulting services for the Miami River Economic and Market Study. Proposals were submitted on April 7, 2003. The selected proposer will have one year to complete the study after the City issues its notice to proceed.

In conclusion, this objective remains relevant and some progress has been made in achieving it. Therefore, the objective will be retained and no changes to the language of this objective are presently recommended.

Policy Relevance. Policies under this objective continue to be relevant and are also consistent with the recommendations made in the Miami River Corridor Urban Infill Plan. Therefore, the policies should be retained.

Objective 2

Actions shall be taken to improve linkages between the shipping terminals on the Miami River and surface transportation routes and modes.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this Objective:

- The number of ships, tonnage, types of cargo, and the value of cargo handled shall be reported. Numbers of full-time and part time employment at these shipping terminals, and an estimate of the annual payroll for each category, shall also be reported. These data

shall be sought from the Miami River Coordinating Committee and the Miami River Marine Group.

- The Department of Planning and Zoning in conjunction with the Florida Department of Transportation, the Metropolitan Planning organization, the Miami River Coordinating Committee and the Miami River Marine Group will prepare transportation improvements updates listing completed, underway, programmed and planned transportation improvements of significant repercussion to the Port of Miami River.

Objective Achievement Analysis. The text of this objective is strictly related to surface transportation in the vicinity of the Port of Miami River. As shown above, this objective has two monitoring measures of which only one relates to the objective directly. Therefore, this achievement analysis will be based primarily on the second monitoring measure.

The cargo terminals along the Miami River continue to be accessible by roadway, and in one area, by railroad along the Northwest North River Drive from NW 23rd Street to NW 36th Street. Northwest North River Drive and Northwest South River Drive are the main thoroughfares directly serving the cargo terminals. A series of roadway and bridge improvements have taken place in the vicinity of the Port of Miami River since 1995. The adopted 1995 EAR for the Port and Aviation Element, specifically the Port of Miami River Subelement, identified a series of programmed roadway improvements. Table 2.2.4-1 below lists those roadway improvements and the current status.

Table 2.2.4-1
Port of Miami River
Status of Programmed Roadway Improvements Listed in the Adopted 1995 EAR

Roadway	From	To	Improvement	Status
NW 36 Street	HEFT	Hialeah Drive	Resurface	Completed
SR 836	HEFT	I-95	Corridor Improv.	Completed (*)
SW 12 Avenue	Coral Way	NW 11 Street	Widen, Resurface	Completed
SW 2 Avenue	Bridge over River			2003 completion
NW 36 Street	NW 17 Avenue	I-95	Resurface	Completed
Le Jeune Road	SR 836	NW 21 Street	Widen	Completed
Le Jeune Road	Interchange	Central Boulevard	Interchange	Completed
NW 37/27 Avenue	NW 21 Street	NW N. River Dr.	New construction	Deferred

Source: Adopted 1995 EAR for the Port and Aviation Element, 1995.
Note: * Portions completed and new improvements underway.

Table 2.2.4-2 below shows roadway projects in the vicinity of the navigable portion of the Miami River that were not listed in the 1995 EAR but that have been completed since then.

Table 2.2.4-2
Port of Miami River
Other Roadway Improvements Completed Since 1995

Roadway	From	To	Improvement	Status
SW 1 Street	Miami River		Bridge rehab	Completed
Brickell Bridge	Miami River	Brickell Avenue	Bridge replacement	Completed
South River Drive	Bridge		Bridge replacement	Completed
NW 36 Street	NW 17 Avenue	NW 37 Avenue	Resurface	Completed
SR-112	EB Ramp Bridge	NW 36 Street	New ramp	Completed
SR-112	Bridge	NW 32 Avenue	Bridge rehab	Completed
NW 7 Avenue	NW 36 Street	NW 157 Street	Resurface	Completed

Source: Information compiled by the Miami-Dade Department of Planning and Zoning, 2003.

The adopted 1995 EAR also identified five long-range plan, unfunded improvements along SR-112 and LeJeune Road. These planned improvements have since been removed from the long-range plan or modified. Table 2.2.4-3 shows the roadway improvements in the vicinity of the Miami River included in the 2003 Transportation Improvement Program of Miami-Dade County.

A major multi-modal transportation facility, the Miami Intermodal Center (MIC), will be constructed in the vicinity of the Port of Miami River. The MIC, to be located south of Northwest South River Drive, east of LeJeune Road, north of Central Boulevard and west of NW 37th Avenue, will serve as a transportation hub for different modes of transportation systems including Tri-Rail, Metrorail, Metrobus and other modes serving Miami International Airport. As result of this facility, a number of roadway improvements are programmed to help alleviate traffic congestion in and around MIA and the programmed facility. These improvements shall also benefit traffic circulation and connectivity of the unincorporated area of the Port of Miami River.

Table 2.2.4-3
Port of Miami River
2003-2007 Programmed Roadway Improvements

Roadway	From	To	Improvement	Year
SR 836 (EB)	East Bound	Toll Plaza	New toll plaza	2003
NW 17 Avenue	Miami River	Bridge	Refurbishing	2003
Okeechobee Rd.	SR 826	Le Jeune Road	Corridor Improvement	2003-04
Okeechobee Rd.	SR 826	W. 19 Street	Widen	2005
NW 27 Avenue	NW 11 Street	Intersection	Intersection Imp.	2004
Le Jeune Road	NW 7 Street	SW 8 Street	Access Improvement	2005
NW 12 Avenue	NW 16 Street	NW 26 Street	Resurfacing	2004
NW 12 Avenue	Miami River	Bridge	Replacement	2005
NW 27 Avenue	NW 20 Street	NW 215 Street	Resurfacing	2007
SR 112 (WB)	West Bound	Okeechobee Road	New Ramp	2004
Interconnector	MIA	SR-112	Interchange and ramps	2006-2007
SR 836/Intercon.	SR-836	Central Boulevard	Major improvement	2003-2007
SR 836 Express Ln	MIC – Le Jeune	HEFT	New express lane	2006-2007

Source: Miami-Dade County Department of Planning and Zoning; 2003 TIP, Miami-Dade Metropolitan Planning Organization.

In conclusion, this objective has been achieved, remains relevant and should be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. The policies under this objective continue to be relevant and should be retained. No changes to the text of the policies are presently recommended.

Objective 3

The Port of Miami River shall be operated in a manner which minimizes impacts to estuarine water quality and marine resources and adjacent land uses.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this Objective:

- The County's Department of Environmental Resources Management (DERM) shall list progress on shoreline stabilization, stormwater runoff, outfall removal/refitting and overall water quality along the navigable portion of the Miami River.
- Additional Monitoring measures included in the Costal Management Element regarding water quality and protection of natural resources, as related to the Miami River west of N.W. 27th Avenue, are adopted by reference.

Objective Achievement Analysis. Miami-Dade County has been working on several areas addressed by this objective and its monitoring measures. Regarding shoreline stabilization along the river, a review of the records of the Miami-Dade County Department of Environmental Resources Management (DERM) revealed that 12 permits for the placement of ripraps and 137 permits for seawall construction have been issued since 1995. Additional shoreline stabilization exempted from permitting might have taken place during this reporting period.

With regard to stormwater runoff and outfall removal/refitting along the Miami River, DERM has embarked in the process of retrofitting the storm water drainage systems for the two drainage basins, Basins 21 and 23, in the Miami River area. The purpose of this process is to reduce runoff contaminants by providing treatment of the first inch of runoff water before discharge into the river. Work in drainage Basin 23 was completed in 2000, and permits and bid letting are currently being processed for the work on Basin 21. Completion of the work on this basin is scheduled for 2005.

Improving water quality in the navigable portion of the Miami River has been another major objective of Miami River advocates and state and local programs. Pollution in the River is associated with old drainage and sewer systems as well as the intense industrial and urban development in the vicinity of the River. Modern drainage systems provide on-site retention and treatment for most stormwater runoff to prevent pollutants from reaching the River. Old systems are gradually being replaced through redevelopment and, as previously stated, County/municipal drainage improvement projects. In 1996, the former Miami River Coordinating Committee adopted the Upper Wagner Creek Water Quality Improvement Plan. The water quality in the Upper Wagner Creek area of the Miami River has been considered to be among the worst in the State of Florida. Currently, less than half of the plan has been implemented; however, significant success has been documented. Today water quality in the Wagner Creek area has improved but

the job is not complete. In February 2002, the Stormwater Subcommittee of the Miami River Commission issued its Miami River Basin Water Quality Improvement Report, building upon experience gained in the Wagner Creek project. This Report identifies the following working areas where improvements are needed: stormwater, wastewater, enforcement/compliance, water monitoring and research, management, and land planning. The total cost of these improvements is estimated to be in the vicinity of $18,000,000. Funding sources are being sought.

The MRC has determined that River dredging was the number one priority to improve the Miami River. The river needs to be dredged for both economic and environmental reasons. In 1990, the U.S. Army Corps of Engineers (ACE) recommended maintenance dredging of the federal navigation channel as the build-up of sediments restricted ship navigation. The sediments are contaminated primarily from stormwater drainage systems that empty into the River from 69 square miles of urban and industrialized areas. Dredge spoils are normally disposed of in the ocean, however, the U.S. Environmental Protection Agency (EPA) ruled the sediments do not meet ocean disposal criteria and must be disposed in an upland site, greatly increasing the cost of the project. In 1993, the ACE estimated the cost of dredging at $12 million and upland disposal cost at $90 – 105 million. The MRC established a Dredging Working Group. The Group established a phased dredging approach that lowered the overall cost to $74 million and a more favorable cost-sharing ratio of 80% federal and 20% non-federal for the dredging project. The Environmental Impact Statement and Dredge Management Plan have been completed. ACE Headquarters personnel in Washington, D.C. are currently revising the proposed contract agreement between the County and ACE. As soon as the contract is executed, the ACE will issue a Request For Proposal to select the contractor. Work on this project is expected to begin early this fall.

In conclusion, this objective has been achieved and remains relevant. Therefore, the objective will be retained and no changes to the language of this objective are presently recommended.

Policy Relevance. The policies under this objective continue to be relevant and will be retained. No changes to the text of the policies are recommended.

2.2.5 The Port Of Miami Master Plan Subelement

The Port of Miami Master Plan Subelement was originally part of the Coastal Management Element of the County's Adopted Comprehensive Development Master Plan (CDMP). As a result of the 1995 Evaluation and Appraisal Report (EAR), new requirements of State planning law and changes needed to update the CDMP, the subelement was modified to implement the recommendations of the County's adopted 1995 EAR and proposed for relocation to the then proposed Transportation Element. Modifications to the subelement and relocation to the proposed Transportation Element were adopted on October 10, 1996.

The Port of Miami (POM) is the world's largest cruise homeport and one of the largest container ports in the southeast. As such, the Port of Miami must periodically update and refine its planning documents to respond to trends in the marketplace, projected cargo and cruise business, and community and environmental issues and, as a result of the events of September 11, 2001, plans for effective security enhancements are increasingly important. As a result of the update of the Port of Miami Master Plan, the Miami-Dade County Seaport Department filed in April 1999, Application No. 12 to amend the adopted Port of Miami Master Plan Subelement and the adopted Capital Improvements Element Schedule of Improvements for the seaport. On March 28, 2000, the Board of County Commissioners adopted Ordinance No. 00-45 providing disposition of the April 1999 Applications to amend the CDMP. Application No. 12 was adopted with changes.

The Port of Miami Master Plan Subelement has two (2) main goals: Goal A, which calls for the Port to retain its position as the top-ranking cruise port of the world while expanding its role as one of the leading container ports in the nation. This goal is to be implemented through the achievement of objectives 1, 2 and 3. Goal B, which calls for the Port to coordinate with federal, state, regional and local agencies its operation and expansion activities, and to minimize any detrimental effects that these activities may have on the environment, the community and supporting infrastructure. This goal is to be implemented through the achievement of objectives 4 thru 8.

Objective 1

The port shall maintain and renovate existing cruise facilities and complete the construction of new cruise facilities required by the year 2005 to accommodate the projected number of cruise passenger ships.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Number of passengers, on an annual basis.
- Cruise related improvements made at the Port of Miami since 1998.
- Cruise related infrastructure improvements made since 1998.

Objective Achievement Analysis. The Miami-Dade County Seaport Department monitors the number of cruise passengers on an annual basis. Table 2.2.5-1 below shows the recorded cruise passenger volumes per year from 1998 to 2002.

Table 2.2.5-1
Port of Miami
Cruise Passenger Volumes – Years 1998 - 2002

Year	Cruise Passengers
1998	2,960,264
1999	3,112,355
2000	3,364,643
2001	3,391,091
2002	3,642,990

Source: Miami-Dade County Seaport Department and Department of Planning and Zoning, April 2003.

As the table above shows, the POM accommodated over 2.9 million cruise passengers in 1998 and over 3.6 million cruise passengers in 2002, a 23% increase. The POM has averaged an annual growth in its cruise passenger volumes of approximately 5.4%.

The Port's eleven cruise passenger terminals have witnessed the introduction of larger vessels in terms of size and passenger capacity that allows cruise lines to create greater efficiencies while offering expanded choices to their consumers. These larger vessels are replacing the smaller ones as they come on-line. The growth in the size of vessels affects the Port's ability to handle the passenger demand and requires renovations and/or expansions in order to accommodate this increased demand. Review of cruise facilities improvements and redevelopment in the POM during the EAR reporting period include:

- Expansion of cruise terminals 3, 4 & 5 to add three times the prior terminal space;
- New roadways, lighting and landscaping;
- Construction of a 750-space, multi-level parking garage and ground level parking lots to serve cruise terminals 3 and 5;
- Mooring improvements (equipment used to secure a vessel) to cruise terminals 2 through 5; and
- Maintenance dredging at cruise terminal 12.

Additionally, several projects for cruise facilities improvements programmed for instructor

- A new multi-level, 750 space parking facility is expected to be completed in 2003
- New INS and Customs processing facilities at cruise terminal 8 and 9
- 1,300- space, multilevel parking garage for cruise terminal 8 and 9
- New cruise terminals D and E
- Improved roads for cruise traffic circulation

In conclusion, analysis of cruise passenger volumes, port facility and infrastructure improvements reveal that this objective has been successfully achieved; its intent remains relevant and will be retained. Port staff would like to substitute this objective's specific time frame from 2005 to 2015.

Policy Relevance. All policies under this objective continue to be relevant and should be retained. However, Policy 1A also calls for the Port to promote public access to waterfront and recreation areas. Pursuant to security provisions enacted by the Miami-Dade County Board of County Commissioners in Chapter 28 A of the County Code, the entire shoreline area of the Port of Miami is a designated security zone. Therefore, the Seaport Department staff is requesting the elimination of this requirement for security reasons, and is developing policies relative to new security requirements.

Objective 2

The port shall expand its cargo-handling and related intermodal facilities to the optimum extent possible by the year 2005 to accommodate the projected cargo tonnages.

CDMP Monitoring Measures. The following are the adopted monitoring measures for this objective:

- Cargo tonnage on an annual basis.
- Cargo related improvements made at the Port of Miami since 1998.
- Cargo related infrastructure improvements made since 1998.

Objective Achievement Analysis. The Miami-Dade County Seaport Department monitors the cargo tonnage on an annual basis. Table 2.2.5-2 below shows the cargo tonnage recorded per year from 1998 to 2002.

Table 2.2.5-2
Port of Miami
General Cargo - Years 1998 - 2002

Year	Cargo Tonnage
1998	7,056,664
1999	6,930,312
2000	7,804,946
2001	8,247,004
2002	8,681,735

Source: Miami-Dade County Seaport Department and Department of Planning and Zoning, May 2003.

Cargo activity at the POM has increased 23% in the past five years. This growth rate is expected to continue.

Cargo related infrastructure improvements made at the POM since 1998 include:

- Provides over 1,000 additional linear feet of cargo berthing;
- Cargo container Berth 5 and a repaving of various container yards;
- Installation of a new high-mast lighting to facilitate cargo handling completed in 2000;

- A new banana cargo yard and a Florida Power & Light (FP&L) substation;
- A new fumigation and cargo yard; and
- Acquisition of three rubber tire gantries (RTGs) for utilization in the container yard to allow for high density stacking to maximize space utilization.

Additionally, several projects for cargo facilities improvements are programmed for construction

- New Wharf 6 and 7;
- Two Super Post Panamax
- Crane electrification
- New Cargo yard
- Various Mooring Improvements
- Dredging within Fisherman's Channel to 42-feet
- New Cargo Gate
- New roads for improved traffic circulation

In conclusion, analyses of cargo volumes, cargo related facility and infrastructure improvements at the POM reveal that this objective has been achieved. Its intent remains relevant and should be retained. Seaport Department staff is requesting that this objective's specific time frame be changed from 2005 to 2020.

Policy Relevance. Policies under this objective continue to be relevant and should be retained. Policy 2D should be deleted since the 1992 Cargo Master Plan was essentially updated in the Port's 2020 Master Development Plan.

Objective 3

The port shall maintain and improve existing facilities and support infrastructure to extend their service life and maximize efficiency so as to minimize the requirements for new facilities, and keep pace with evolving industry trends and technology.

CDMP Monitoring Measure. The following is the adopted monitoring measure for this objective:

- Number and type of facility maintenance and efficiency improvements made since 1998.

Objective Achievement Analysis. This objective entails preventative maintenance programs for all facilities including efficiency in land use and operations, as well as improvements to equipment, technology and facilities deemed necessary to support existing and expanded operations. A number of maintenance and efficiency improvements were completed during this EAR reporting period. These projects include:

- Acquisition of a comprehensive preventative maintenance program; and

- Evaluation and update of equipment, technology and facilities in conjunction with the Capital Improvement Program (CIP).

In conclusion, Objective 3 has been achieved, continues to be relevant and should be retained. Therefore, no changes to the text of this objective are presently recommended.

Policy Relevance. Policy 3A calls for the Port to developed a comprehensive preventive maintenance program for its facilities. According to Seaport Department staff this policy has been implemented with the conversion to the comprehensive preventive maintenance program, and therefore the policy will be deleted. The remaining policies for Objective 3 are directive in nature, continue to be relevant and should be retained.

Objective 4

The Port shall promote sound environmental practices in its day-to-day operations and long-term maintenance and expansion plans, consistent with the unique role and responsibilities of deep-water port facilities.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

- Assessment of the Port of Miami's environmental accomplishments and practices during the EAR reporting period.

Objective Achievement Analysis. The POM continues to evaluate its environmental practices based on new information and community issues. Environmental training for tenants and Port staff is offered on an annual basis to discuss best management practices and the importance of the Biscayne Bay, stormwater pollution prevention plans have been designed and maintained to ultimately protect the bay; and environmental audits are performed annually to assist with safe and sound environmental practices. All appropriate environmental agency approvals are obtained for port expansion activities ranging from DERM Class I permits, to Florida Department of Environmental Protection Environmental Resource permits (FDEP ERPs) for storm water management systems, to dewatering permits as necessary.

In conclusion, this objective has been achieved, continues to be relevant and will be retained. Therefore, no changes to the text of this objective are presently recommended.

Policy Relevance. Policies 4A, 4B, 4C and 4D under this objective continue to be relevant and will be retained. However, Seaport Department staff is requesting that the 2001 planning time horizon of Policies 4C and 4D be extended to 2006 and 2007, respectively. The reasons for these changes are that the Port, in conjunctions with the U.S. Army Corps of Engineers, is currently exploring options for mitigation banking for possible expansion projects, and the Port is still in the planning stages on the development of a Dredged Materials Management Plan.

Objective 5

The Port shall maintain its policy of cooperation with all levels of government and the community in the resolution of environmental issues.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

- Assessment of the Port of Miami's environmental accomplishments and practices during the EAR reporting period.

Objective Achievement Analysis. The POM actively cooperates with all levels of governments and communities to find resolutions to environmental issues, particularly those issues regarding the sensitive nature of Biscayne Bay. Turbidity controls are utilized as appropriate in all maintenance dredging activities, and disposal of spoil not used as fill is disposed of in accordance with all applicable rules and regulations. Between 2000 and 2001, riprap has been placed to stabilize the remaining shoreline on the northern part of Lummus Island. In 2001, the FDEP, with Miami-Dade County DERM concurring, issued a signed Consent Order regarding the resolution of a dredging violation. This resulted in a mitigation project at the Oleta River State Park. In 2001, the Port also conducted a noise study as it relates to Fisher Island, a neighboring community. And in 2002, the Port participated in the creation of an artificial reef with 120' barges at the Plueger Artificial Reef site.

In conclusion, Objective 5 has been achieved, continues to be relevant and will be retained. Therefore, no changes to the text of this objective are presently recommended.

Policy Relevance. Policies 5A through 5C under this objective are directive in nature, continue to be relevant and will be retained. No changes to the language of these policies are presently recommended.

Objective 6

The Port shall coordinate off-island expansion activities with affected communities.

CDMP Monitoring Measure. The following is the adopted monitoring measure for this objective:

Number and condition of Port of Miami off-island expansion and related coordination activities.

Objective Achievement Analysis. In this instance, the monitoring measure cannot be used because the POM has not been able to expand its operations and facilities off-island during this reporting period. POM is currently conducting analyses relative to off-island expansion activities and continues to coordinate off-island expansion activities with affected communities.

Therefore, achievement of this objective is evaluated through a policy implementation assessment.

With regard to Policy 6B, which calls for the Port to integrate expansion activities into the physical, social and economic fabric of the surrounding communities, Port staff has indicated that this policy will be implemented once a new site is found for off-island expansions.

Policy 6C calls for the Port to provide public access to the waterfront when appropriate and not in conflict with safety and operation practices. This policy and Policy 1A were adopted to ensure that any expansion of Port facilities into existing and planned public parkland shall be designed to promote public access to the waterfront and planned park. However, security concerns have directly affected this policy and security revisions thereto are necessary.

In conclusion, Objective 6 is currently being implemented, continues to be relevant and should be retained. Therefore, no changes to the language of this objective are presently recommended.

Policy Relevance. Policies 6A and 6B outlined under Objective 6 continue to be relevant and should be retained. Policy 6C should be removed in light of new security issues.

Objective 7

The Port shall continue to identify and obtain in a timely manner all required permits, leases, development approvals or land acquisition needed to implement its Master Development Plan; to construct and operate its facilities in cooperation with the appropriate federal, state and local agencies, and in conformance with the Miami-Dade County Comprehensive Development Master Plan.

CDMP Monitoring Measure. The following is the adopted monitoring measure for this objective:

Types of environmental permits and approvals issued during the EAR reporting period.

Objective Achievement Analysis. This objective is directory in nature. The following is a list of the types of permits obtained by the Seaport Department:

- Florida Department of Environmental Protection (FDEP) Port master dredging permit extended through March 2006
- U.S. Army Corps of Engineers (USACE) Master dredging permit extended through March 2006
- USACE Government cut dredging permit extended through October 2007
- Miami-Dade County Department of Environmental Resources Management (DERM) Class 1 Coastal Construction permits
- Sanitary Sewer extensions FDEP/DERM/WASD
- Sanitary Sewer emergency pump-out DERM/FDEP/WASD

- Environmental Resources Permitting for storm water – FDEP
- DERM Class II storm water permits
- Asbestos Abatement
- Landscape Master Plan 2001
- Navigational study in conjunction with the Miami Harbor Pilots and the USACE
- Signage Plan with FDOT, public works

As the representative of Miami-Dade County's maritime community in commerce and in accordance with Policy 7D, the POM hosts a variety of events. These activities include:

- The Annual Seatrade Convention (premier annual convention for the world's cruise industry);
- Started in 2002 the PortFest (a community open house for the public to showcase the economic contributions of the Port with its international trade partners);
- Job Fair – Started in 2002 to facilitate access to maritime-related jobs;
- The SeaCargo Americas – (a bi-annual forum for cargo executives to exchange views on global trade and enhance the growth of the industry that will start in May 2003);
- AFRICANDO (an annual cultural festival highlighting local and international artists and vendors from the African continent and other diverse communities to increase the local awareness of these cultures and straighten multi-lateral trade);
- CAMACOL (Latin Chamber of Commerce Hemispheric Congress – conduit for trade relations between Miami-Dade County, Latin America and the Caribbean); and
- Florida Custom Brokers & Freight Forwarders Port Night (a forum to interchange ideas for the national association dedicated to the transportation and cargo industries).

These events are examples of the POM's leadership in the local, regional and international maritime communities.

In conclusion, based on the adopted monitoring measure it can be said that Objective 7 has been achieved. Since this objective continues to be relevant, it will be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. Policies outlined under Objective 7 continue to be relevant and should be retained. No changes to the language of these policies are presently recommended.

Objective 8

The Port shall coordinate port expansion activities to achieve appropriate land uses, joint-uses and joint-venture partnership.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

Assessment of the Port of Miami's expansion activities and joint-venture partnership.

Objective Achievement Analysis. The POM coordinated with a number of federal, state, regional and local agencies on matters related to the Port's expansion during the EAR reporting period, specifically:

- U.S. Army Corps of Engineers (USACE)
- Florida Department of Environmental Protection (FDEP)
- Florida Department of Transportation (FDOT)
- South Florida Regional Planning Council
- South Florida Water Management District
- Miami-Dade Metropolitan Planning Organization
- Miami-Dade County Department of Planning and Zoning
- Miami-Dade County Water and Sewer Department
- City of Miami and their respective planning and administration agencies
- United States Customs Service
- Immigration and Naturalization Service
- Department of Homeland Security

The POM has been engaged in a variety of public/private cooperative efforts such as:

- Port of Miami Terminal Operators Company (POMTOC);
- deepening of the Federal navigational channels, a joint project with the U.S. Corps of Engineers; and
- a joint partnership with Miami-Dade Police Department Auto Theft Task Force and U.S. Customs resulted in the installation of a Stolen Auto Recovery (STAR) system at the Gates of the Port.

The Port has been working since 2001 with Miami-Dade Aviation Department and the National Transportation Safety Administration on an express baggage check-in system, expected to be on-line in 2004.

The Port is working with U.S. Customs and the Terminal Operators regarding the installation of an upgraded Gamma Ray system, similar to STARS, to enhance security in cargo yards.

In conclusion, Objective 8 has been achieved, continues to be relevant and should be retained. Therefore, no changes to the text of this objective are presently recommended.

Policy Relevance. Policies outlined under this objective are directive in nature, continue to be relevant and should be retained. Therefore, no changes to the languages of these policies are presently recommended.

Objective 9

The Port shall coordinate landside[2] and waterside[3] transportation issues with pertinent Federal, State, County (including adjacent counties) and City agencies to ensure that the Port's requirements are consistent with the abilities of the agencies to provide the services needed to support these activities.

CDMP Monitoring Measures. The following is the adopted monitoring measure for this objective:

> Number and conditions of transportation projects affecting the Port of Miami during the EAR reporting period.

Objective Achievement Analysis. The Port of Miami made meaningful progress during the EAR reporting period toward the achievement of Objective 9 by cooperating with transportation agencies regarding transportation projects affecting the Port of Miami. A comprehensive analysis of the port's transportation system was performed. The Port has been involved in the *Downtown Transportation Master Plan* and as January 2002, the study team has completed data collection and model input. The Plan is to be completed by the end of 2003. Although the plan is not yet finalized, the Port is working with applicable agencies and community members to improve NE 1st and 2nd Avenues for truck access to and from I-395 and NE/NW 5th and 6th Streets for the new I-95 access ramp at either 6th or 8th Street. In addition, the POM participated in the Southeast Florida Ports Regional Inter-modal Program Study completed by FDOT in 2000, has taken the lead role in the public involvement program in FDOT's project for a new access ramp to SR 836 westbound from I-95 at NW 6th or 8th street, and continues to work closely with the US Army Corps of Engineers, the Miami Harbor Pilots and other interested agencies to complete a General Reevaluation Report to deepen and widen the channels to allow for safe, navigational passage of ships to and from the Port. This report is to be completed in 2003. The Southeast Florida Port Regional Inter-modal Program Study was completed by FDOT in 2000.

In conclusion, the POM has been working to maintain its objective of cooperation with the State, the County and other agencies in the planning and implementation of transportation projects affecting the Port. Objective 9 has been achieved, continues to be relevant and should be retained. Therefore, no changes to the language of this objective are recommended.

Policy Relevance. Policies 9A through 9I outlined under Objective 9 continue to be relevant and should be retained. These policies may be revised to include new relevant transportation initiatives.

Objective 10

The Port shall work with County departments and utility providers to ensure that necessary capacity is available to support existing and proposed uses in advance of need.

[2] Landside means road and rail transportation systems.
[3] Waterside means channels and turning basins.

CDMP Monitoring Measures. The following is the adopted monitoring measure for Objective 10:

Infrastructure improvements made since 1998.

Objective Achievement Analysis. In November 2000 the Port completed a comprehensive Stormwater system evaluation as part of the National Pollutant Discharge Elimination System (NPDES) permitting process. Port consultants are now developing an overall Stormwater Management Master Plan, which will be incorporated in the Port's Capital Improvement Program (CIP) once it is completed in 2004. In 2001 a Consent Agreement was signed with DERM for the design and construction of sewer line extension. The design of the sewer line extension has been complete and construction is anticipated to be complete by February 2004. Even though it has been determined that there is enough water pressure through 2005, planning for future needs is currently underway.

In conclusion and as indicated above, the POM has been working on the achievement of Objective 10. Moreover, this objective remains relevant and should be retained. No changes to the language of this objective are presently recommended.

Policy Relevance. Policies 10A and 10B call for the preparation and implementation of a Stormwater Pollution Prevention Plan by year-end 1999. As indicated above, the Port has completed a Comprehensive Stormwater System Evaluation as part of the NPDES and consultants are now developing an overall Stormwater Management Master Plan. The plan is to be completed in 2004. Therefore, Policies 10A and 10B will be modified to continue the implementation phase and to change their time frames from 2000 to 2004.

With regard to Policy 10C, Port staff has also requested that this policy be modified to eliminate the consent agreement portion of the policy since the Seaport entered a consent agreement with DERM in November 2001 for the design and construction of a sewer line extension. Policy 10D called for the Port to study the capacity of water lines by year-end 2000. As indicated above, it has been determined that there is enough capacity to meet future demands. However, Seaport Department staff has indicated that the Port is currently planning for future needs. Therefore, these two policies will also be modified to reflect the changes requested by Port staff.

2.3 HOUSING ELEMENT

Goal I, Objective 1

Promote housing choice for all Miami-Dade County citizens regardless of race, ethnicity, age, sex, family composition, disability or sexual orientation such that residential segregation indices are reduced to a value of 50 or less.

CDMP Monitoring Measures. Residential segregation indices using census and other data as necessary and available will be used to report on results achieved related to this objective.

Objective Achievement Analysis. A segregation measure referred to as the index of dissimilarity was applied to 1990 and 2000 census data to determine the extent of residential concentration. The index represents the percent of either of two populations being compared that must be redistributed so both exhibit identical percentage distributions among census tracts. The range is between 0 and 100 with values above 60 considered high, those below 30 being low, and those in between being moderate. The formula is as follows:

$$I.D. = (\Sigma[Xi - Yi]/2) \times 100$$

Where I.D. = the index of dissimilarity. Xi = the percent of the first population in the ith census tract. Yi – the percent of the second population in the ith census tract. The absolute differences between the Xi and Yi terms are summed and divided by 2. That result is then multiplied by 100 to express it as a percent.

Analyses were done for the following groups: White, Black and Other, Hispanic and non-Hispanic, White Hispanic, White non-Hispanic and Black Hispanic. Table 2.3-1 shows the results. It can immediately be seen that in 1990 for all pairings other than White and Black the indices are in the moderate range and all except the first one improved over the decade. The concentration levels of Whites and Blacks was virtually unchanged over the ten year period. Somewhat of a surprise is the rather low index for White Hispanics and Black Hispanics. This could be an anomaly caused by use of census tracts as the geographic unit. The method is sensitive to the areas used and many census tracts are quite large and could have segregation within the tract which would not be captured.

Table 2.3-1
Indices of Dissimilarity Comparing Miami-Dade County's
Main Racial and Ethnic Groups, With Each Other for 1990 and 2000*

	1990	2000
White/Black	70.9	71.1
Hispanic/Non-Hispanic	53.1	50.1
White Hispanic/Black Hispanic	49.8	40.0
White Hispanic/White Non-Hispanic	50.8	44.4

Source: U.S. Bureau of the Census, 1990 and 2000 Census of Population STF-2A and SF-2. Indices calculated by Research Section, Miami-Dade Department of Planning & Zoning.

A proxy was used to assess housing patterns with respect to gender and family composition. This proxy, female-headed households with children, should be a good indicator since it is expected

that this group would have more difficulty obtaining housing and thus is a good bellwether for the status of other groups. Matching these households with all family households produced an index of 27.5 in 1990 and a still lower one in 2000 of 22.5. Thus, at least with respect to locational choice this select group seems to be doing well.

For some variables other measures were used. For example median age was analyzed by examining the mean deviation of the median by census tract from the countywide median. This measure has steadily declined from 7.24 years in 1980 to 4.57 in 1990 and slightly lower still in 2000 at 4.52. This suggests that over time various age groups are mixing more in Miami-Dade.

Calculating a dissimilarity index for persons with disabilities would not be useful since it only measures geographic distribution, not an assessment of housing adequacy. There is no available data source which would supply that information. However, following the dictates of the Americans With Disabilities Act, Miami-Dade County has developed programs and procedures which apply to the issues raised by the needs of the disabled. A strong public awareness program is also operational.

Within the limits of the measuring techniques, it appears that Objective 1 is being achieved.

Policy Relevance. All policies under Objective 1 were reviewed for continued relevance and all should be retained. Policy 1B needs to be rewritten for intent and clarity. Policy 1C should be modified for specificity.

Goal I, Objective 2

Designate by the year 2015 sufficient land (+/-40,000 acres) to accommodate sites at varying densities for mobile and manufactured homes and other housing types that meet the housing needs of all current and future Miami-Dade County residents, with special attention directed to those for very low, low and moderate income housing units.

CDMP Monitoring Measures. To assess progress toward this objective it was planned to report on the number and location of mobile and manufactured homes put in place since 1995. For all housing 1990 and 2000 census data was to be utilized to compare the distribution of the number and value of units by type by census tract or other appropriate area.

Objective Achievement Analysis. Since the objective referred to the designation of land for housing it was decided to examine that aspect of development. In the 1995 EAR projected land requirements out to 2005 and 2015 were presented. It was expected that through the late nineties to 2005 1,858 acres annually would be required and between 2005 and 2015 an annual figure of 2,146. A split between single and multi-family of 86 percent to 14 percent was anticipated. Data from the Research Section's land use files for 1994 and 2000 shows that for this six year period 4,766 acres of residential land was used. This amounts to 794 acres per year, well below the previous estimates. This difference may be partially explained by an earlier inflated housing projection. By 2000, an additional 137,000 housing units were expected while only about 125,000 were added. But this figure is only 12,000 lower, which can't account for the large

acreage gap. This lower number is the result of reduced population growth and a larger average persons-per-unit value. Still, the large discrepancy in the expected versus actual residential land use is difficult to reconcile. It implies that recent development has gone in at very high densities which does not appear to be the case based on other evidence. Another possible factor at work is overcrowding whereby more population can be accommodated by relatively fewer housing units. This condition has been worsening in Miami-Dade over the years rising from 13.6 percent in 1980 to 18.2 in 1990 to 20 percent in 2000. Perhaps a better way to assess accomplishment of this objective is to again employ the dissimilarity index as was done previously.

In 1995, indices were calculated for moderate income and low-income housing units using 1990 census data. The index for the first was 52.0, which was slightly lower than the 1980 value. This was for a house valued at $75,000. Using 95 percent of the median family income for affordability produces a housing value of $85,500. The 2000 index was a low 36.3, indicating significant improvement in dispersal.[1] For low income housing (80 percent of median) the previous index was 55.1 and in 2000 dropped to 44.4; a notable improvement. The housing value is $70,000 versus $60,000 in 1990. Even the index for very low-income owner housing (50 percent of median) is relatively low at 56.8 (a $45,000 housing unit). This index was not calculated in 1995.

The same analysis was applied to rental housing. In 1990, the moderate-income index was 48.3 (corresponding rent $750 monthly). This has declined to a very low index of 10.6, implying great dispersion (rent level $854 or below). The low and very low-income 2000 indices are 17.7 and 35.8 respectively. In 1990, the low-income value was 46.9 ($600 rent versus $719 in 2000).

It bears repeating that the dissimilarly index measures the degree of dispersion of a variable. It does not provide evidence regarding the degree to which housing needs are being met. As has been shown, in Miami-Dade County there is a large shortfall in the supply of affordable housing as attested to by the high levels of cost burden and overcrowding (See Tables 2.3-2 and 2.2-3).

There is no separate data that allows a tracking of manufactured homes. Mobile homes hardly exist in Miami-Dade County since Hurricane Andrew destroyed so many of them. New mobile home parks are no longer permitted in the County.

[1] It should be noted that in the earlier report, an affordability factor of 2.75 was used for converting income to housing value. For consistency with other current analysis, 2.5 was used this time. This has the effect of lowering the index.

Table 2.3-2
Housing Need by Type, Tenure, and Income Range
Miami-Dade County, Florida
2000

	Owner Occupied		Renter Occupied		Total Households	
Household Size	Cost Burdened	Not Cost Burdened	Cost Burdened	Not Cost Burdened	Cost Burdened	Not Cost Burdened
Very Low-Income						
1-2	28,194	13,777	55,859	19,906	84,053	33,683
3-4	9,819	3,063	21,740	11,826	31,559	14,889
5+	5,977	1,598	13,533	3,084	19,510	4,682
Subtotal	43,991	18,438	91,132	34,816	135,122	53,254
Low-Income						
1-2	12,527	16,938	21,839	10,981	34,366	27,883
3-4	9,998	6,779	13,480	8,901	23,478	15,660
5+	6,219	4,366	4,950	4,354	11,169	8,709
Subtotal	28,743	28,064	40,269	24,235	69,013	52,252
Moderate Income						
1-2	10,083	24,855	9,505	21,621	19,588	46,416
3-4	11,255	18,200	4,735	17,274	15,990	35,428
5+	4,910	10,143	1,419	7,787	6,329	17,907
Subtotal	26,248	53,198	15,659	46,682	41,907	99,751
Middle Income and Higher						
1-2	10,711	94,434	2,647	41,117	13,358	135,378
3-4	9,868	92,547	938	22,463	10,806	114,864
5+	2,586	40,484	220	7,263	2,806	47,686
Subtotal	23,166	227,465	3,805	70,843	26,970	297,928
Totals						
1-2	61,515	150,004	89,850	93,625	151,365	243,360
3-4	40,940	120,589	40,893	60,464	81,833	180,841
5+	19,692	56,591	20,122	22,488	39,814	78,984
Grand total	122,148	327,165	150,865	176,576	273,012	503,185

Source: Miami-Dade County, Department of Planning and Zoning, Research Section, 2003.

Table 2.3-3
Overcrowded Units by Tenure, Size, and Income Range
Miami-Dade County, Florida
2000

	Owner Occupied		Renter Occupied		Total Households	
	Total Households	Overcrowded	Total Households	Overcrowded	Total Households	Overcrowded
Very Low Income						
Household Size						
1-2	41,972	890	75,764	5,841	117,736	6,731
3-4	12,882	2,688	33,566	16,598	46,448	19,286
5+	7,575	4,275	16,617	12,526	24,192	16,801
Subtotal	62,429	7,853	125,947	34,965	188,376	42,818
Low Income						
Household Size						
1-2	29,465	504	32,820	4,116	62,285	4,620
3-4	16,777	2,938	22,381	13,514	39,158	16,452
5+	10,585	6,061	9,303	7,085	19,888	13,146
Subtotal	56,827	9,503	64,504	24,715	121,331	34,218
Moderate Income						
Household Size						
1-2	34,938	685	31,126	2,711	66,064	3,396
3-4	29,455	6,489	22,009	10,584	51,464	17,073
5+	15,053	8,607	9,206	7,060	24,259	15,667
Subtotal	79,446	15,781	62,341	20,355	141,787	36,136
Middle Income						
and Higher						
Household Size						
1-2	105,146	768	43,764	3,611	148,910	4,379
3-4	102,415	12,699	23,402	7,991	125,817	20,690
5+	43,070	16,526	7,483	5,127	50,553	21,653
Subtotal	250,631	29,993	74,649	16,729	325,280	46,722
Totals						
Household Size						
1-2	211,521	2,847	183,474	16,279	394,995	19,126
3-4	161,529	24,814	101,358	48,687	262,887	73,501
5+	76,283	35,469	42,609	31,798	118,892	67,267
Grand Total	449,333	63,130	327,441	96,764	776,774	159,894

Source: Miami Dade County, Department of Planning and Zoning, Research Section, 2003.

Policy Relevance. All policies under Objective 2 were reviewed for continued relevance. Policy 2A needs to be rewritten to reflect new County intentions and policies. Mobile homes need to be deleted from Policies 2B and 2C. Policy 2D needs to be rewritten to update and possibly expand what is intended with respect to zoning code changes.

Goal I Objective 3

Assist the private sector in providing affordable housing products in sufficient numbers throughout the County by the year 2015, (approximately 272,000 units), keeping in mind the housing needs of existing and future residents as well as making an appropriate percentage (about 49 percent) of new affordable housing available to very low, low and moderate income residents.

CDMP Monitoring Measures. Progress was to be measured by utilizing 1990 and 2000 census data to calculate cost burden by area. Cost burden is defined as a household devoting more than 30 percent of its income to housing costs.

Objective Achievement Analysis. A somewhat different approach than cost burden was used to assess meeting this objective. Table 2.3-4 was developed to display overall affordability. This is done by first listing the overall Miami-Dade median family income for 1990 and 2000 and selected percentages from 30 to 150. The next set of columns indicates the affordable rental rate or housing price those incomes will support. The last set of columns gives the breakdown of 1990 and 2000 housing units which are in those cost categories. The percentages are cumulative and allow comparison between the two census years with respect to the affordability of the housing stock. For example, in 1990 a renter household at 50 percent of the median income could afford 29 percent of the existing rental units. At the 80 percent of median income level, a household could afford 73.5 percent of all rental units. However, at these two assumed income levels in 2000 only 25.8 and 70.4 percent respectively of the rental units were attainable. Following this logic, it can be seen that for all rental levels affordability declined as each 2000 percentage is lower than its 1990 counterpart. For owner occupied, the situation is somewhat better as households in the 30, 50, and 95 percent median brackets could command more of the market than in the earlier year. But if a household was at the 80 percent of median income level the situation deteriorated over the decade. In 1990 one third of the units were affordable while in 2000 less than one-fourth met this criterion. A drop off also occurred at the two highest income levels.

At first glance Table 2.3-4 seems to present a mixed picture. Certainly on the rental side there was a general decline in affordability. Of the 19,800 additional rental units only 3,800 were affordable to low income households (below 80 percent of median), or about 20 percent. Despite increases in three of the owner categories as noted above, the changes were even less favorable for affordability than rental. There were 174,000 new owner units put in place but only about 16,000 (9.2 percent) were in the low income affordable range. Some improvement was registered in the two lowest income ranges but this was more than offset by less market access by households between the 80 and 120 percent income range. This segment is what has been termed “workforce housing” and includes generally middle income working households.

Overall, only 10.2 percent of the total added units are affordable to low income households although 35.8 percent of total households in the County are in that income range. While 43.7 percent of the existing stock includes housing priced at or below the low-income cutoff, many of these units are occupied by households with higher incomes.

Table 2.3-4
Housing Stock and Affordability by Selected Income
Miami-Dade County, Florida

Percent Median Income	Median Family Income		Affordable Housing Costs*				Census Housing Units							
			Renter		Owner		Renter Occupied**				Owner Occupied			
	1990	2000	1990	2000	1990	2000	1990	%	2000	%	1990	%	2000	%
	$31,113	*$40,260*												
30	$9,334	$12,078	$233	$302	$23,334	$30,195	30,905	10	30,378	9.3	2,163	0.8	12,288	2.7
50	$15,556	$20,130	$389	$503	$38,890	$50,325	89,197	29	84,259	25.8	9,439	3.4	47,880	10.8
80	$24,890	$32,208	$622	$805	$62,224	$80,520	226,445	73.5	230,227	70.4	93,000	33.8	108,912	24.2
95	$29,556	$38,247	$739	$956	$73,891	$95,618	267,173	86.8	270,865	82.9	99,099	36	172,522	38.4
120	$37,334	$48,312	$933	$1,208	$93,336	$120,780	289,414	93.7	297,785	91.1	158,099	57.4	244,332	54.4
150	$46,668	$60,390	$1,167	$1,510	$116,670	$150,975	307,954	100	309,901	94.8	199,497	72.5	317,971	70.8
							307,954	*100*	*326,833*	*100*	*275,298*	*100*	*449,333*	*100*

* Factors used are 30% of income for rent and 2.5 times income for housing cost.
** Specified renter occupied housing units
Source: U.S. Bureau of the Census, Decennial Census 1990, STF-3 and 2000, SF-3.
Compiled by Miami-Dade County Department of Planning and Zoning, Research Section, February, 2003

This objective was achieved only in the sense that new households were provided housing. But, in general, lack of affordability increased as did overcrowding indicating that insufficient numbers of affordable units were delivered.

Policy Relevance. All policies under Objective 3 were reviewed for continued relevance and all should be retained. The target year in Objective 3 needs to be advanced to 2025 and a new needs estimate provided. Policy 3D should be revised to include updated examples of affordable housing financing mechanisms.

Goal I Objective 4

Develop ways to communicate accurate information about public and private affordable housing development, especially very low, low and moderate income housing, throughout the County.

CDMP Monitoring Measures. It was proposed to list and describe the various means employed to inform the public about the characteristics of affordable housing and its development.

Objective Achievement Analysis. There are two policies in the current Housing Element, which address this objective. The intent was to have an active promotional program to make the public aware that affordable housing can be successfully integrated into market rate developments. For budgetary reasons this was never carried out. As part of another affordable housing initiative directed by the County Manager's office which seeks to put in place an inclusionary zoning program some attention was given to the design issue. The success that several other areas around the country have had with combining the different cost levels of housing was emphasized to a citizens' task force and to all County commissioners in various meetings. For the most part however, this objective was not achieved.

Policy Relevance. All policies under Objective 4 were reviewed for continued relevance and all should be retained. Objective 4 should be strengthened. Policies 4A and 4B require slight revisions.

Goal II Objective 5

Reduce by 30 percent the number of substandard housing units in the County by encouraging the identification, rehabilitation and conservation of the existing housing stock, including historic structures, and provide that an increased number of very low, low and moderate income units (about 5 percent) comes from rehabilitation and adaptive re-use of existing structures.

CDMP Monitoring Measures. The number of units rehabilitated through Miami-Dade County sponsored or approved programs over the past five years would be reported and substandard housing would be obtained from the American Housing Survey.

Objective Achievement Analysis. As noted in the prior EAR, measuring this objective is particularly challenging. Data on substandard housing is fragmented and very hard to acquire. The U.S. Census does not report on overall housing adequacy, only the absence of complete plumbing or kitchen facilities. These two indicators have steadily declined in Miami-Dade County over the years due to the fact that the housing supply is in general very recent (See Table 2.3-5). In 1990 only 0.40 percent of owner occupied and 2.07 percent of renter occupied units lacked complete plumbing. Counts from the 2000 Census found comparable figures of 0.06 and 1.60 but for the first time the totals went up considerably. This is almost certainly caused by illegal subdividing of existing housing or conversion of garages or other structures including substandard additions. This phenomenon has become widespread in Miami-Dade.

Table 2.3-5
Age of Housing Units
Miami-Dade County, Florida, & The United States, 2000

	Miami-Dade County		United States	
Total Units	852,278	100.0%	115,904,641	100.0%
1999 or Later	14,020	1.6	2,755,075	2.4
1990 to 1998	118,701	14.0	16,945,983	14.6
1980 to 1989	137,693	16.1	18,326,847	15.8
1970 to 1979	179,134	21.0	21,438,863	18.5
1960 to 1969	143,144	16.8	15,911,903	13.7
1950 to 1959	146,202	17.2	14,710,149	12.7
1940 to 1949	71,375	8.4	8,435,768	7.3
1939 or Earlier	42,009	4.9	17,380,053	15.0

Source: U.S Census Bureau, Census 2000, Summary File 3. Miami-Dade County's Department of Planning and Zoning, Research Section, 2003.

Concerning rehabilitation, the Miami-Dade Housing Agency reports that since 1995 there have been completed or are underway, 282 single-family rehabs and 1,911 multi-family rehabs. This is a substantial proportion of their total assisted housing units as of 2000, which is 27,318.

All the entitlement cities also have rehabilitation programs, but the extent of these programs is not known. Likewise, there is no data on adaptive reuse, but this is becoming increasingly popular. Anecdotal information suggests that this type of housing is not being intended for lower income households however.

Policy Relevance. All policies under Objective 5 were reviewed for continued relevance. Objective 5 needs to be reworded to retain the basic intent, but in a way that is measurable. Policies 5C and 5D can be deleted as they are being carried out.

Goal II Objective 6

Increase by a least 5 percentage points, affordable housing opportunities from within the existing housing stock and improved sites, and within reasonable proximity to places of employment, mass transit and necessary public services for very low, low and moderate income residents in existing improved urbanized areas.

CDMP Monitoring Measures. Information compiled by the various County agencies providing rehabbed or adaptive reuse housing was to have been acquired. The distributional pattern would be analyzed with respect to proximity to necessary services, facilities, and job locations.

Objective Achievement Analysis. This objective has the intent of providing additional low cost housing through what is commonly known as "filter down." In fact, this process has always been the largest supplier of lower cost housing. Between 1990 and 2000, Table 4 indicates that for owner-occupied housing a substantial increase occurred in the relative share of the two lowest cost categories. However, this objective is focused on how public agencies can consciously engage in the process to assure that at least a small percentage of these housing units meet the criteria for adequate housing. This is usually done through rehabilitation programs or acquisition of sites by demolition of dilapidated multi-family structures or single-family units.

There is a plethora of rehabilitation programs administered by the Miami-Dade Housing Agency and, as reported under Objective 5, almost 2,200 units since 1995 have or are planned to be done. The problem is determining what proportion of these actually add to the affordable stock. If a homeowner gets a rehab loan to improve the house, the result is a better quality unit but not a net addition to the stock. An abandoned unit that is rehabbed or demolished and the lot made available to an affordable housing provider results in a new unit.

The Miami-Dade Housing Agency also has a program that involves the latter activity. The County acquires land in a variety of ways: voluntary sales, eminent domain purchase, dedication and escheatment for non-payment of taxes. The Infill Housing Initiative, as it is called, is a program whereby these properties are either sold at low cost to private builders or conveyed free of charge to non-profits who specialize in affordable housing. Other incentives are included such as fast track permitting and clearance of County liens, financing assistance and help with infrastructure problems. To date, since the inception of the program in late 2000, about 250 homes have been built and some 350 are in the pipeline.

Policy Relevance. All policies under Objective 6 were reviewed for continued relevance. Objective 6 needs a major overhaul. The first part should be merged with Objective 5 and the second part made into a stand-alone objective. Policy 6B needs rewording to update it. Policy 6C should be investigated to determine if it is still necessary. A new policy should be added regarding gaining affordable housing from the existing stock.

Goal III Objective 7

Encourage more use of housing design and development alternatives that are aesthetically pleasing, encourage energy efficiency and enhance the overall health, safety and general welfare of County residents.

CDMP Monitoring Measures. Efforts to promote better housing design, construction methods, materials, energy conservation improvements or related matters were to be reported upon.

Objective Achievement Analysis. The Department of Planning and Zoning is implementing the charrette process as a collective planning effort that develops a cohesive small area plan. The plan incorporates the various planning priorities of a community and County agencies in a more efficient and in a more cost effective manner because of this collaborative process.

The proposed center for the neighborhoods' surrounding the subject corridors is designed following traditional town planning principles. A network of streets is extended and connected to existing roads, establishing new north-south and east-west connections. These connections, although direct, are not totally uninterrupted. Small cranks and turns are incorporated as traffic calming measures as well as a tool to create vistas and focal points at the end of every street.

Towards the core, around the public open space, buildings are two to three stories, with possible retail (cafes & restaurants) on the ground floor. The civic buildings that face the open space become a civic space of prominence in this new center. For that reason, its front is enhanced and landscaped accordingly to address the importance of this new public space.

Townhouses occupy the blocks directly adjacent to the mixed-use buildings surrounding the open space. As the proposed network of streets meets the existing fabric, the residential types become free-standing, single-family, side yard or rear yard homes.

The principles used in the design of these plans guarantee that additional residential uses are implemented with very few additional impacts in term of a further increase in traffic to the surrounding neighborhoods:

1) Since the commercial sections will be contained within the more intense core, new development dwellers in this area can access most services by foot or by car, through back, newly platted streets, without ever getting on a main road.

2) The new roads in this plan become alternate routes so that existing development can access the commercial district without impacting main roads, therefore, local traffic is reduced.

3) Lateral connections are improved, incorporating more use of housing design and development alternatives that are aesthetically pleasing, encouraging energy efficiency and enhancing the overall health, safety and general welfare of County residents while traffic that speeds through is calmed at the pedestrian core.

Policy Relevance. All policies under Objective 7 were reviewed for continued relevance. In Objective 7, the word "encourage" will be replaced by "bring about" and the objective will be revised for proper emphasis. Policy 7B is being done and is no longer needed. Policy 7D needs rewriting for clarity.

Goal III Objective 8

Maintain the stock of suitable rural housing, as well as housing for farm workers as needed.

CDMP Monitoring Measures. The status of rural and farm worker housing would be compared to that five years earlier using the best available data.

Objective Achievement Analysis. This objective is no longer totally relevant. While technically there is still rural housing in Miami-Dade County the households that reside therein are predominately above average income and those seeking a rural lifestyle do not require housing programs to assist them. This objective was originally aimed at the provision of farm worker housing. It was noted in the previous EAR that the number of true migrants working in the agricultural area had declined (the estimate in 1995 was 12,000). Due to decreases in farm acreage it is virtual certain that the number has dropped further. Taking the place of the migrant is the permanent farm worker resident. These people work in agriculture for part of the year and take other jobs as available during the remainder of the year. They need low or moderate income affordable housing and are served by a number of housing programs administered by city agencies or non-profit organizations. They are really no different than other lower income working households. The Homestead Housing Authority, the Everglades Community Association and Centro Campesino all have provided such housing and somewhere in the vicinity of 1,000-2,000 units are in place. True migrant housing is far less – probably under 500 units.

This objective has been largely met and needs to be rewritten to bring it up to date by removing reference to rural.

Policy Relevance. All policies under Objective 8 were reviewed for continued relevance. Objective 8. The objective has been largely achieved, but is no longer totally relevant. It needs to be redirected to meet the needs of the future, or deleted. As with the objective, both policies under it need to be closely reviewed to determine what the intent should be.

Goal III Objective 9

Provide for the special housing needs of the County's elderly, disabled, homeless, orphaned children, families in need, persons with AIDS and others in need of specialized housing assistance.

CDMP Monitoring Measures. Information and data compiled by the specific agencies dealing with these special client groups would be obtained and analyzed.

Objective Achievement Analysis. Policies 9A and 9B relate to the special needs of people with disabilities with regard to housing.

Making a community accessible to persons with disabilities is an integral part of making housing available. Miami-Dade County has taken a multi-faceted approach that has already made

housing more available to these special need households, but there is still more to be accomplished.

The first standards for accessibility were developed by the American National Standards Institute in 1961. They were reviewed, but not changed, in 1971 and published as ANSI A117.1 R 1971. There were seven pages of standards. Miami-Dade County was one of the first in the nation to adopt the standards into its South Florida Building Code in 1971 with limited application. In housing, it applied only to multi-family dwellings with fifty or more units. In 1974, the County added significantly to its accessibility requirements in the South Florida Building Code including some specifications not found in the ANSI or any other national standards. Apartments in multi-family dwellings with four or more units were required to provide 29" clear width doorways throughout the apartments and to provide access to all public areas. While providing 29" clear width doorways did not guarantee that maneuvering space would be provided nor assure the passage of larger wheelchairs, it did considerably increase the likelihood that apartments would be made accessible.

In 1989, Chapter 553 adopted the ANSI A117.1 1986 Standards and reserved to the state the right to establish requirements for accessibility. In 1990, the Americans with Disabilities Act (ADA) was signed into law and brought with it the ADA Accessibility Guidelines, based on ANSI A117.1 1986. A requirement was included for at least one bedroom and one bath in each single-family house to have 29" clear width doorway. The State also adopted the language of the federal Fair Housing Act requiring that all multi-family units on an accessible level or served by an elevator be made accessible. The requirements for single-family houses will help to make it possible for people with disabilities to alter homes to make them accessible. The Fair Housing requirements will considerably increase the stock of accessible apartments nation wide.

The Miami-Dade Housing Agency has instituted a program with forgivable loans up to $30,000 to assist people with disabilities who need to make alterations to their homes for accessibility and to make other home repairs as needed.

The County has included in its Traditional Neighborhood Ordinance a requirement that developers include in their proposal information on how they will provide housing that is adaptable to meet the accessibility needs of persons with disabilities. There are also requirements that at least one entrance to single-family homes be accessible and that the other be adaptable. In Miami-Dade County, the provisions of the state code are enforced by the Building Department. Code Enforcement has countywide oversight.

With regard to existing housing, Miami-Dade County has had a Fair Housing ordinance for many years and has included people with disabilities within its protection. When the federal Fair Housing Amendments were enacted in 1990, a requirement for reasonable accommodation in existing facilities was included. The requirement for reasonable accommodation means that the landlord can no longer refuse to allow a tenant to widen a doorway, put grab bars in the bathroom, ramp an entrance, or make a laundry room accessible. That is a big step forward, but there are serious limitations. The landlord can require that the tenant pay for the accommodations, even if they are in the common areas and even if they benefit people other than

the tenant making the request. The tenant can also be required to pay to change the facility back to its original condition if that is appropriate.

The Miami-Dade County Fair Housing Ordinance now includes the language of the Federal Fair Housing Act. The Dade County Equal Opportunity Board, which enforces the ordinance, is dealing frequently with landlords who have refused to make reasonable accommodations. There does not seem to be an effective method of determining, in listings, which vacant facilities are accessible to people with disabilities and which are not. When calls are placed to a facility, there is usually no information available regarding accessibility. Finding an accessible apartment or house is extremely difficult.

Within the public sector, recipients of federal funds are required to make five percent of their existing units accessible to people with disabilities. Miami-Dade County policies giving people with disabilities, who need accessible facilities priority on the waiting list, have varied over the years. In Section 8 housing, there does not seem to be an effective method of determining, in listings, which vacant facilities are accessible to people with disabilities. In emergency situations, such as that created by hurricane Andrew, the County has developed lists of vacant housing. Landlords were asked whether or not their facilities were accessible to people using wheelchairs, and the response was indicated on the lists. Most landlords, however, had little or no idea of what constitutes accessibility. It was extremely difficult for people with disabilities to find accessible housing after Andrew. Many people with disabilities had to stay in accessible hotels for extended periods.

The Miami-Dade Housing Agency has two fully accessible facilities, Singer Plaza and Martin Fine Villas, specifically for people with disabilities. MDHA has also made at least 5% of the units of all new facilities accessible.

Policy 9C. Progress with regards to Policy 9C is difficult to measure. The Miami-Dade Housing Agency has 4,839 units of elderly housing, with 4,114 occupied. However, the fact that there are vacancies should not be taken to imply that the needs are being met.

Miami-Dade County's Consolidated Plan for the 1999-2002 period points out the problems that the elderly/frail elderly confront. They have a special need for supportive housing, as noted in the section dealing with Populations with Special Needs. The elderly have high rates of poverty, special health care needs, frequent infirmity and isolation. They are often among the most cost burdened where housing costs are concerned. Because they often live on fixed incomes, they are more susceptible to being displaced or evicted from housing. The major cities also have elderly housing programs.

One area where Miami-Dade County has been in the forefront in recent years is development of programs for the homeless. Since its creation by the County Manager on July 1, 1992, the Office of Homeless Programs, now the Homeless Trust, has responded to the many needs of Miami-Dade County's homeless population through a variety of different initiatives and projects.

The local continuum of care plan, (i.e. the Miami-Dade County Community Homeless Plan) called for the creation of a coordinating body, the Trust, to ensure the Plan's implementation,

administer the proceeds of the food and beverage tax and other resources identified by the Trust for the continuum, and serve in an advisory capacity to the Board of County Commissioners on all issues relating to homelessness. Created in 1993, the Trust built upon the broad-based representation of the local task force responsible for developing the plan and has a 27-member board that is composed of representatives of key stakeholders in the planning and delivery of homeless housing and services in the County. Trust Board members include a balanced representation of the business and civic community appointed by the Greater Miami Chamber of Commerce (the county's largest chamber of commerce); elected officials selected by the Miami-Dade League of Cities and the local governing board (Board of County Commissioners); homeless advocates, homeless and/or formerly homeless persons and homeless services and housing providers representing the various levels of the continuum and special needs populations. A policy Board, the Trust does not provide direct services but, rather, contracts with public and private non-profit organizations to implement the goals of the Homeless Plan.

The Trust Board has a multi-level committee system that encourages and includes the additional representation of housing developers, health care professionals, business leaders, interested citizens and other funders of social services. Included is a Long Range Planning Committee that serves as the strategic planning process for the Trust. This Committee meets on an annual basis to review the elements of the long-range plan that has been developed, gauge progress in the implementation of those initiatives to-date, and recommend other initiatives. Trust members are represented on all committees to ensure sufficient continuity and coordination of all planning initiatives. A close working relationship between the Trust and the Miami-Dade Housing Agency allows for the improved implementation and administration of the Shelter Plus Care and Section 8 SRO Moderate Rehabilitation projects.

Emergency Housing. The Homeless Plan called for the development of 1,000-1,500 new emergency housing beds (called temporary care in the Plan) at "homeless assistance centers" (HACs) to provide anywhere from seven (7) to up to sixty (60) days of stabilization and comprehensive needs assessment. In addition to providing decent and safe housing, meals and clean clothing, these campus-style centers serve as a "triage" of sorts for the identification of a homeless person's social, physical, and housing needs.

Homeless Assistance Center (HAC): The HACs serve as the intake centers for the continuum of care. It is where men, women, and children come in lieu of remaining on the streets. It is a relatively short-term residency, and in these Centers, services are provided to homeless people to help them regain and restore their lives.

The Community Partnership for Homeless: (CPHI) mission is to site, construct and operate up to three Homeless Assistance Centers and to raise the private funding necessary to assist in the implementation of the Miami-Dade County Community Homeless Plan. CPHI is further committed to assisting the Trust in this implementation through encouraging private sector involvement.

Transitional Housing: The Plan called for the development of 750 new transitional housing beds, called primary care in the Plan, to provide from six (6) to nine (9) months of housing with intensive case management assistance to prepare individuals for independent living. It is usually

targeted to homeless individuals and families in emergency housing who have had their most immediate needs met, and who require more intensive, specialized services to achieve residential and financial stability. Private care programs are residential or supported on scattered sites.

Permanent Housing Units: This represents the third, and final, stage of the continuum. While a goal was not initially established in the Plan for the number of units proposed to be expanded, a Blue Ribbon Panel created by the Trust set forth a plan for achieving a goal of 2,500 new advanced care units. These units may be SRO's, project-based, scattered site, market rate, and/or voucher-funded. Preference is given to projects that re-integrate homeless persons into the community and projects that provide long-term, follow-along services, such as relapse prevention, continuing education, and family support. The Plan further identified sources of funding for this expansion to include state and federal funding (tax credits; Mc Kinney) or locally-controlled federal funds (CDBG/HOME).

More than 1,845 advanced care units have been developed by or through the Trust since its inception using a variety of funding sources and strategies. To jump-start the development of permanent (and transitional) housing for homeless persons, the Trust requested and received a one-time set-aside of CDBG/HOME funds to provide capital acquisition, rehabilitation and new construction funding for SRO's and other multi-family projects. These funds were used to leverage state low-income housing tax credits, SAIL funds and Super NOFA program funds, and resulted in the creation of 258 units of permanent housing (and 451 units of transitional housing). The annual development of the Gaps and Needs Analysis provides an opportunity for review of the increased need and demand for permanent supportive housing.

Policy 9D. Policy 9D is concerned with the non-homeless with special needs. This grouping includes: elderly, frail elderly, mentally and physically disabled, persons with AIDS, and others. Their numbers are difficult to establish. The estimated total of persons in need of supportive housing for all categories is well over 100,000. The largest numbers are in the elderly and frail elderly. The 2000 Census reported 138,295 persons seventy-five or over, with almost 30 percent being eighty-five or above (38,468). It is not known how many of these have some type of housing need. The severely mentally ill are the third largest group. In 1998, these groups totaled over 111,000. The 2000 census reported an astonishing 849,419 persons with some type of disability, almost 38 percent of the population. However, from a housing perspective, there are four groups of most importance[2]:

Sensory disability	63,977
Physical disability	152,733
Mental disability	103,508
Self-care disability	61,750
	381,968

The remaining groupings are disabled and persons with AIDS. The Florida Department of Health estimates the cumulative number of persons with AIDS to be 19,912 in 1998. It is estimated that of this number, about 16,000 require support housing.

[2] There is overlap between these groups of an unknown amount, so the total potential clientele that requires assistance is below this figure.

Obviously, many of these persons in the various groups may be institutionalized and some are adequately housed, but many are not. Also, the population continues to grow so these special housing needs also expand. Therein is the biggest difficulty; the lack of sufficient resources to really deal with those needs as Section D. Other Special Needs of the 2003 Consolidated Plan states:

> "OCED is consulting with the Alliance for Human Services to help identify gaps in services to special populations in the County by social service agencies. Supportive services for the elderly and frail elderly are being coordinated with the Community Action Agency, the Miami-Dade Department of Human Services, and JESCA for transportation services. Supportive services for persons with disabilities are being coordinated with the Miami-Dade Office of Americans with Disabilities Act Coordination. In addition, services for persons with alcohol and drug addiction are being coordinated with the Miami-Dade Department of Human Services and several non-profit agencies. Services for public housing residents are being coordinated with the Overall Tenant Advisory Committee.[3]"

In Miami-Dade County, effective programs are in place to provide the housing for those persons with special needs. Unfortunately, only a fraction of those requiring help are able to receive it. In 2002, the following list of facilities shows part of the response to these special needs.

Facility Type	Total Homes	Total Beds/Units
Adult Living Facilities	634	8,892
Crisis Stabilization Unit	7	196
Intermediate Care Facility	20	536
Residential Treatment Facility	19	409
Adult Family Care Home	57	256
Total	737	10,289

Policy 9E assures that owner-occupied group homes and foster care facilities of six or fewer beds are allowed to be provided. In the Land Use Element, Policy 1L is a statement of support for the programs and policies of the Housing Element. In addition, in the Land Use Element section, Interpretation of the Land Use Plan Map: Policy of the Land Use Element a category known as "Congregate residential uses" is discussed. This category includes group homes and foster care homes, and their treatment from a density standpoint and other conditions are set forth. Zoning records show that since 1995, several of these facilities have been approved.

Policy Relevance. All policies under Objective 9 were reviewed for continued relevance. Policies 9A, 9B and 9C can be consolidated to help reduce the size of the element.

[3] Miami-Dade County, FY 2003-2007 Consolidated Plan and FY 2003 Action Plan, p. III-12; December, 2002.

Goal III Objective 10

Continue governmental assistance to persons and families displaced and relocated by public projects and encourage private-sector assistance in relocating people displaced by private projects.

CDMP Monitoring Measures. Agency records would be used to ascertain the meeting of this objective.

Objective Achievement Analysis. Within Miami-Dade County government, the principal department where operations displace people is the Miami-Dade Housing Agency. Since 1995, as a result of scaling back its Public Housing Program, the Agency has relocated 1,350 households. In connection with the Scott/Carver HOPE VI redevelopment, another 260 will likely be relocated.

Policy Relevance. All policies under Objective 10 were reviewed for continued relevance and should be retained.

2.4 CONSERVATION AQUIFER RECHARGE AND DRAINAGE ELEMENT

The urbanized areas of Miami-Dade County lie in an unique geographical location between Biscayne Bay Aquatic Preserve, Biscayne National Park and the Everglades National Park. As urban development within Miami-Dade County expands towards these outstanding resources, the County's focus has been and will continue to be the protection and enhancement of the ecosystems and natural resources through preservation of environmentally sensitive wetlands, aquifer recharge and water storage areas.

Objective 1

Improve air quality in the County to meet all standards set by the EPA by 1994 and meet all future EPA air quality standards and their respective deadlines; and reduce human exposure to air pollution.

CDMP Monitoring Measures. The monitoring program for Objective 1 states that "the objective will be measured by the number of exceedances of the National Ambient Air Quality Standards (NAAQS) or exceedances of any future additional standards promulgated by the US Environmental Protection Agency during the period covered by the EAR".

Objective Achievement Analysis. The Miami-Dade County Department of Environmental Resources Management (DERM) has established an ambient air network, which currently consists of 14 air monitoring stations located throughout the County. Figure 2.4-1 locates the stations and identifies the parameters monitored at each. Parameters routinely monitored in the network since 1995 include Ozone (O3), Carbon Monoxide (CO), Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Dioxide (NO2), Wind Speed (WS) and Wind Direction (WD). In late 2001 and early 2002 monitoring stations were added to measure Volatile Organic Compounds (VOC) and Carbonyl; however, no data has yet been released for these two parameters.

Additionally, a continuous PM2.5 monitor (Particulate Matter of less than 2.5 microns) was added in 2002 to aid in the calculation of the air quality index provided daily to the public by DERM. Lead, which had been monitored prior to 1996, was eliminated as a sampling parameter due to low or undetectable concentration since 1993. A summary of air quality parameter exceedances between December 1995 and December 2001 is included as Table 2.4-1.

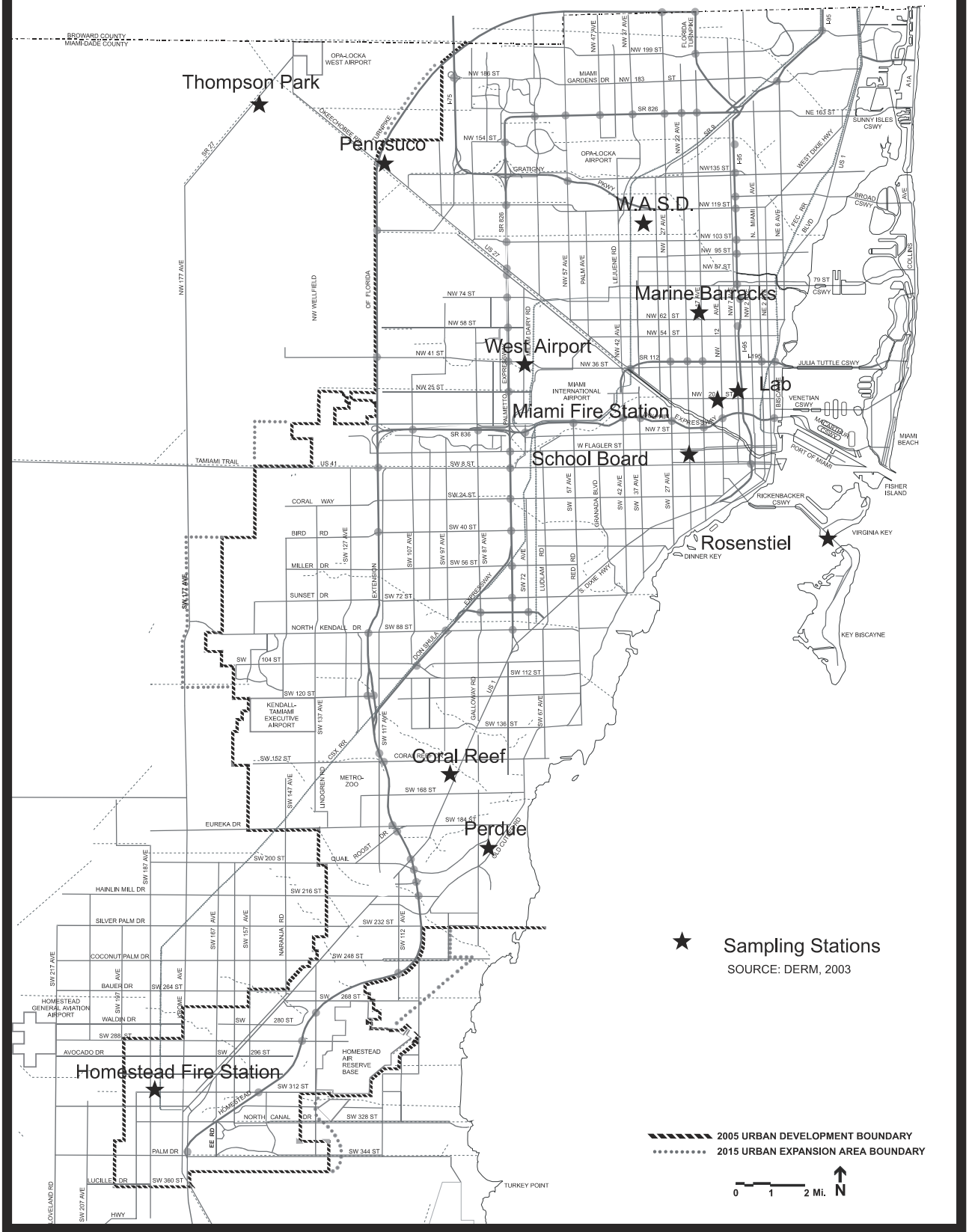


Figure 2.4-1

AIR MONITORING PROGRAM

DEPARTMENT OF PLANNING & ZONING

2003EAR ale

Table 2.4-1
Air Exceedances From 1995 Through 2001

Parameter	1995	1996	1997	1998	1999	2000	2001
Ozone (1- hr O3)	0	0	0	0	0	0	0
Ozone (8 hr O3)	2*^	2*^	3*^	11*	6*	0	2*
Carbon Monoxide (CO)	0	0	0	0	0	0	0
Particulate Matter <2.5 Microns (PM2.5)	-	-	-	-	-	-	0
Particulate Matter <10 Microns (PM10)	0	0	0	0	0	0	0
Sulfur Dioxide (SO2)	0	0	0	0	0	0	0
Nitrogen Dioxide (NO2)	0	0	0	0	0	0	0

Source: Department of Environmental Resources Management, Air Section, 2003
* The 8-hour ozone did not violate the National Ambient Air Quality Standards (NAAQS) for the year.
^ These values are for comparison only. The 8-hour ozone NAAQS started in 1998

Since 1995 no National Ambient Air Quality Standards (NAAQS) were exceeded. It should be noted that the 8-hour Ozone limit was exceeded on 17 occasions since the establishment of the official standard in 1998. This figure excludes two of the exceedances in 1998, which were due to fires in Central America. Although the 8-hour Ozone limit was exceeded the NAAQS associated with the 8-hour Ozone is based on the three-year average of the fourth highest 8-hour reading for each year. Using this method of calculation no NAAQS exceedances for Ozone occurred.

Based upon the data in Table 2.4-1, it can be concluded that Miami-Dade County achieved the objective of air quality compliance for the period between 1995 and 2001. Additional stations and parameters will be added to the network should new federal or state air standards be adopted. Miami-Dade County has maintained its Statewide Improvement Plan (SIP) designation as an ozone attainment area and continues to reduce toxics through permitting and implementation of best management practices for all air pollution sources.

Policy Relevance. Policies 1A and 1B have met their timeframes of 2000 and therefore should be reworded to reflect continued compliance. Additionally, Policy 1A should be rephrased to limit emission and public exposure to EPA defined criteria and other air pollutants. Policy 1 C should be expanded to preclude stationary sources next to residential land uses. Policy 1E is no longer applicable and should be deleted. Policy 1F should be rewritten since methyl bromide will soon be phased out and may be replaced with another volatile fumigant. Policy 1G should be expanded to clarify new asbestos requirements. Policy 1H should be modified to address toxics and carcinogenic pollutants. Policy 1J should be changed to address ozone depleting compounds and not just CFCs or HCFCs. Policy 1K should be expanded to reflect specific recommendations of the plan. Policy 1L should include the word “maintain” along with “expand” for the air monitoring network. A new policy should be added to seek funds for voluntary outreach programs, air monitoring, and implementation of strategies to reduce CO2 and other air toxics. All other policies continue to be relevant and should be retained.

Objective 2

Protect ground and surface water resources from degradation, provide for effective surveillance for pollution and clean up polluted areas to meet all applicable federal, State and County ground and surface water quality standards.

CDMP Monitoring Measures. This objective will be met in any of the primary drainage basins, or individual sub-basins within a primary basin, when the ambient five year average value for each of the twelve NPDES priority pollutants in that basin or sub-basin does not exceed the target criteria.

Objective Achievement Analysis. The approved monitoring measure for this objective is the achievement of target criteria for the twelve priority pollutants monitored through the Stormwater Monitoring program. This monitoring program, a component of the County's surface water monitoring program, covers the entire Miami-Dade County area including unincorporated Miami-Dade County and 25 municipalities. It includes 53 canal and Biscayne Bay sampling sites and is designed to meet the requirements of the National Pollution Discharge Elimination Program (NPDES) as approved by the State of Florida and the Environmental Protection Agency.

Table 2.4-2 is a summary of the NPDES sampling conducted between 1995 and 2002.

Table 2.4-2
NPDES Exceedances 1995-2002

Pollutant	Target Criterion	Number of Samples	Number of Exceedances	Exceedances (Percent)
Biological Oxygen Demand	9 mg/l	944	0	0.00%
Chemical Oxygen Demand	65 mg/l	998	41	4.11%
Total Suspended Solids (TSS)	40 mg/l	976	15	1.54%
Total Dissolved Solids (TDS)	1,000 mg/l	984	26	2.64%
Total Ammonia-Nitrogen and Organic Ammonia	1.5 mg/l	3079	0	0.00%
Total Nitrate (NOX-N)	0.68 mg/l	3071	716	23.31%
Total Phosphate (TPO4)	0.33 mg/l	3076	3	0.10%
Dissolved Phosphate (DPO4)	Not Available			
Cadmium (Cd)	0.0023 mg/l	1072	1	0.09%
Copper (Cu)	0.0258 mg/l	1177	4	0.34%
Lead (Pb)	0.0102 mg/l	1180	0	0.00%
Zinc (Zn)	0.231 mg/l	1169	0	0.00%
Total		17726	806	4.55%

Source: Department of Environmental Resources Management, Restoration and Enhancement Section, 2003

Due to the initiation of the current NPDES program in April 1995, data cannot be compared to previous EAR data. The program data indicates that greater than 95% of the samples collected between 1995 and 2002 meet current primary standards. Nitrate, a fertilizer related parameter, had the highest percentage of exceedances with 23.2% of the samples being in excess of the target criteria. A closer examination of the data indicates that the nitrate exceedances are limited to 12 monitoring stations located in South Dade canals, which are adjacent to agricultural areas.

A secondary measure of this objective is provided by the number of exceedances of water quality standards through the ambient groundwater and surface water monitoring programs. Table 2.4-3 indicates the type of water monitoring program, number of parameters analyzed through the program, number of exceedances and percent non-compliance between 1995 and 2002.

Table 2.4-3
Groundwater/Surface Water Monitoring Program Summary 1995-2002

Monitoring Program	Total Samples (number)	Field Samples (number)	Laboratory Samples (number)	Lab. Sample Exceedances (number)	Lab. Sample Exceedances (%)
Surface Water	251,181	134,433	116,753	12,776	10.94
Ambient Groundwater	15,498	1,327	14,171	91	0.64
Total	266,679	135,760	130,924	12,867	9.83

Source: Department of Environmental Resources Management, 2003

Based on data summarized in Table 2.4-3 above, Miami-Dade County has achieved approximately 89% compliance of laboratory samples collected between 1995 and 2002 in the County's Surface Water Monitoring Program. This monthly sampling program contains 103 stations located throughout Miami-Dade County's fresh water canals and Biscayne Bay as shown in Figure 2.4-2. Since there are numerous field samples collected, with no standards for most of these parameters, the compliance refers to only laboratory samples collected. The previous EAR reported that exceedances of surface water standards were observed in 2.7 % of the samples from the general and intensive canal monitoring events during 1992 and 1993. It is unclear if this figure compared exceedances with all samples or for only those parameters with standards. Since 1993, this program has added new parameters and new stations to better reflect data from various land uses and account for new NPDES permitting rules. Therefore the current data more accurately represents the quality of surface waters in Miami-Dade County.

The Ambient Groundwater Monitoring Program utilizes a total of 50 existing monitoring wells and represents a variety of land uses as shown in Figure 2.4-3. Analytical results collected between 1995 and 2002 indicate that greater than 99% of the laboratory analyses meet groundwater quality standards. Again, this program only relies on those parameters with standards and does not take into consideration field parameters, which do not have groundwater quality standards. The 1995 EAR indicated that compliance was achieved in 94.8% of the groundwater samples analyzed during 1992-1993. An increase in the number of stations and parameters may have resulted in this increase in overall quality.

Based upon the low percentage of groundwater exceedances, it appears that this objective has been partially achieved. Achievement of this objective relative to improvement in the canals through the NPDES monitoring program is difficult to assess due to the lack of comparable data presented in the 1995 and 2003 EAR documents. A more complete assessment, using only parameters with standards, should be reported in the next EAR.

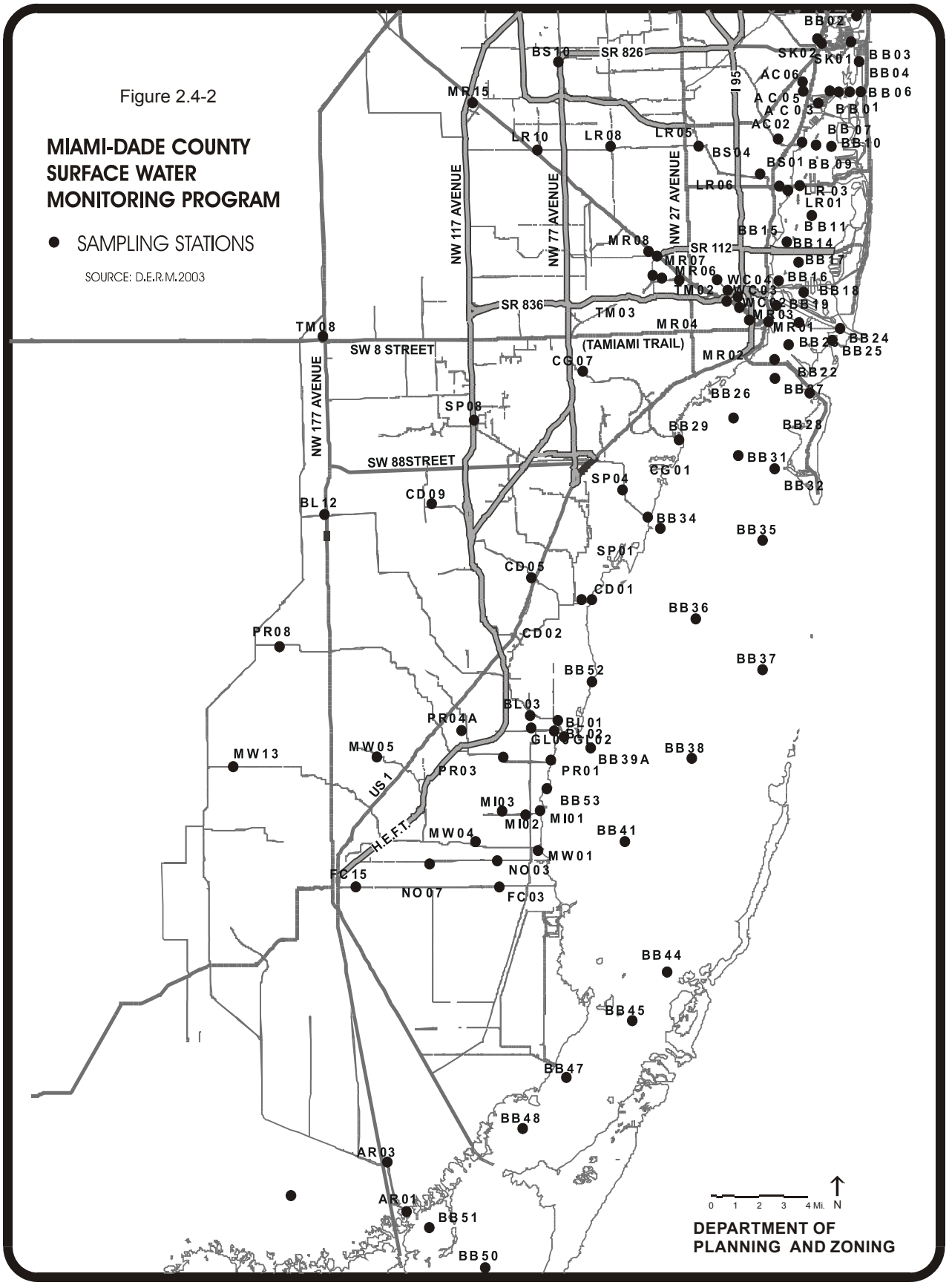


Figure 2.4-2
MIAMI-DADE COUNTY
SURFACE WATER
MONITORING PROGRAM
SAMPLING STATIONS
SOURCE: D.E.R.M.2003
NW 117 AVENUE
NW 77 AVENUE
NW 27 AVENUE
NW 177 AVENUE
SW 8 STREET
(TAMIAMI TRAIL)
SW 88STREET
SR 826
SR 836
SR 112
US 1
H.E.F.T.
DEPARTMENT OF
PLANNING AND ZONING
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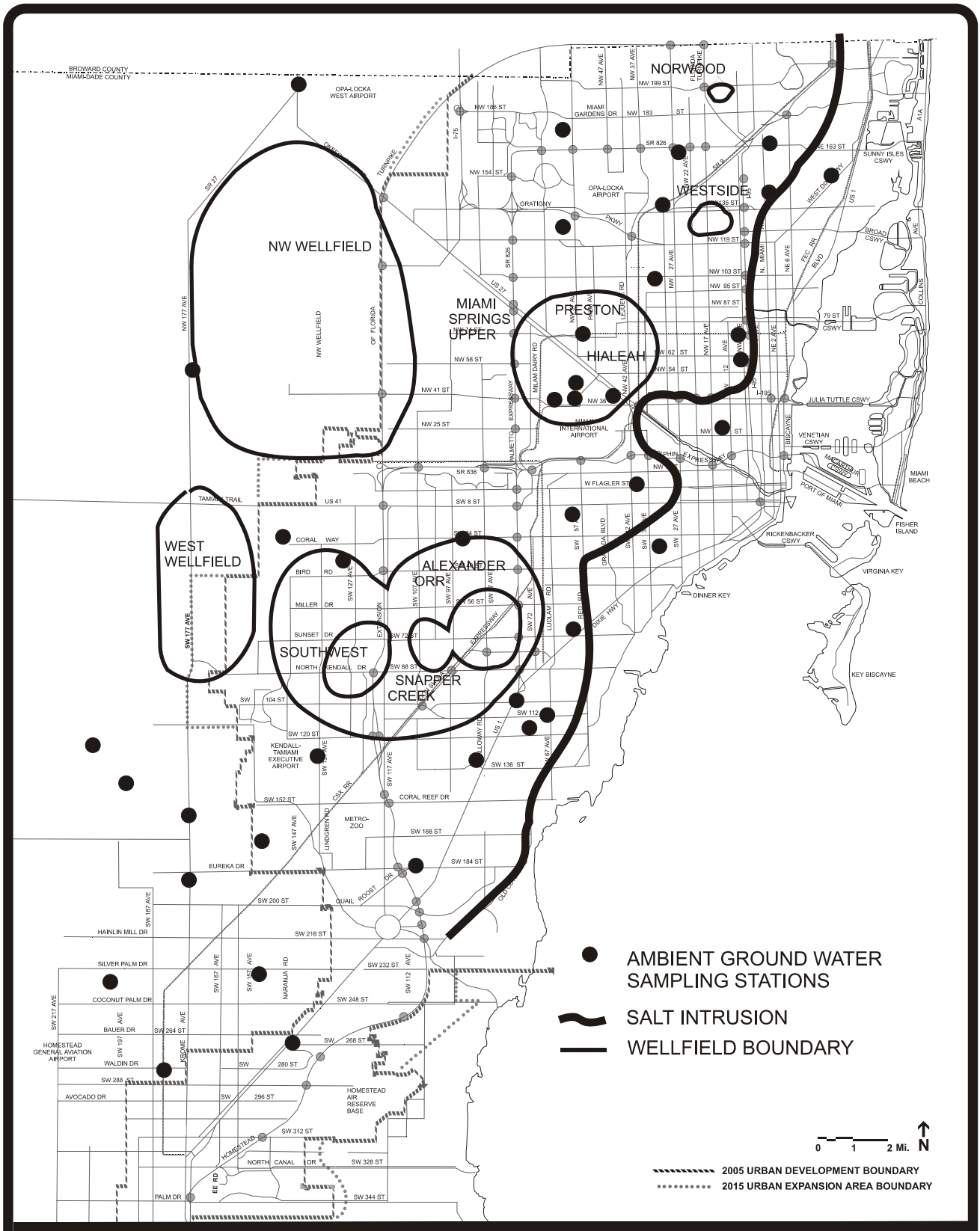


Figure 2.4-3

AMBIENT GROUNDWATER MONITORING PROGRAM

DEPARTMENT OF PLANNING & ZONING

2003EARale

Policy Relevance. Best Management Practices have been established for most water pollutant sources; therefore Policy 2F should be reworded to reflect the current situation. Policy 2H should be revisited since an investigation into the use of fertilizers in the county may not be feasible. All other policies continue to be relevant and will be retained. A second monitoring measure related to groundwater exceedances should be developed for this objective.

Objective 3

Regulations within wellfield protection areas shall be strictly enforced. The recommendations of the NW Wellfield Protection Plan shall continue to be fully implemented as are recommendations that evolve from the West Wellfield planning process.

CDMP Monitoring Measures. This objective will be measured by the number of exceedances of any applicable water quality standard within wellfield protection areas, and the number of times that pumpage has to be curtailed due to pollution incidents that threaten water resources within any defined wellfield protection area.

Objective Achievement Analysis. Miami-Dade County has developed an extensive groundwater monitoring network which consists of approximately 84 active monitoring wells located within the Alexander Orr, Snapper Creek, West, Southwest, and Northwest, wellfields. In 1997 the Norwood wellfield added an additional 16 monitoring wells to the network and in 2000 sampling of 6 monitoring wells in the South wellfield was initiated. Sampling at the wellfields is conducted three times a year. The sampling locations within the wellfield areas are illustrated in Figure 2.4-4. A summary of water quality findings from the wellfield monitoring programs is included in Table 2.4-4.

Table 2.4-4
Wellfield Monitoring Program Summary 1995-2002

Monitoring Program	Total Samples (number)	Field Samples (number)	Laboratory Samples (number)	Lab. Sample Exceedances (number)	Lab. Sample Exceedances (%)
Alexander Orr/ Southwest/ West/ Snapper Creek	43,340	2,780	40,560	23	0.05
Norwood/Offler	15,655	641	15,014	45	0.30
Preston/Hialeah/Miami Springs/ Northwest	48,297	2,538	45,759	227	0.50
Total	107,292	5,959	101,333	295	0.29

Source: Department of Environmental Resources Management, 2003

As shown in this Table 4, water quality within the three largest wellfield areas meets health based drinking water standards for approximately 99.7% of the laboratory samples collected. Of the exceedances noted, the Preston/Hialeah/Northwest and Norwood/Offler wellfields experience high iron content. The water supplies at the Preston/Hialeah and Miami Springs wellfields have occasionally shown levels of volatile organic compounds, which are attributable to the intensity and variety of industrial land uses in the wellfield area. These compounds are remediated during treatment by an air-stripping treatment system.

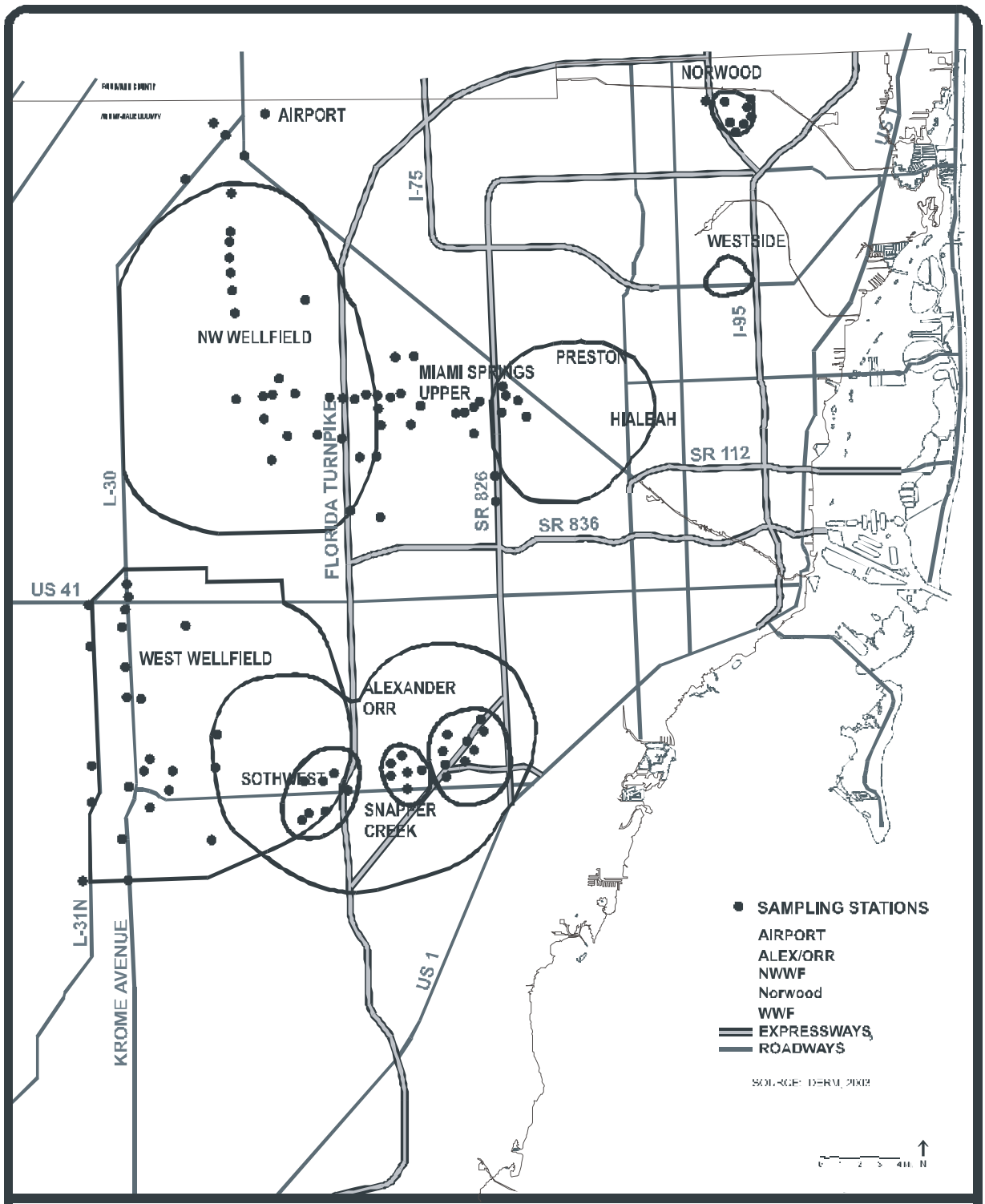


Figure 2.4-4

WELLFIELD MONITORING PROGRAM

DEPARTMENT OF PLANNING AND ZONING

Wellfield monitoring programs have not been established in the Preston-Hialeah, Miami Springs or former Rex Utility wellfields; however, all raw water supplies are sampled for quality prior to treatment.

From 1995 through 2002 there have been two instances of curtailed wellfield pumpage due to potential contamination. The first occurred in September 2002 when a petroleum hydrocarbon leak was discovered. The Naranja Park Wellfield continues to be shutdown as a precaution until a hydrologic barrier can be installed. A second well shutdown occurred in 2001, when a helicopter carrying pesticides crashed near the West Wellfield supply wells causing pumpage to be curtailed for several months. These actions were precautionary measures and no contamination from the spill incidents was found to affect the drinking water wells.

Based upon the high percentage of groundwater compliance with health-based standards and the few instances of pumpage curtailment, this objective appears to have been achieved.

Policy Relevance. Policy 3D should be reworded to reflect the application of agricultural best management practices. Policy 3E should be reworded to define acceptable ancillary uses in this area. Policy 3G may need to be reworded with regard to wellhead protection areas. A new policy or additional language to an existing policy may be necessary to address protection of proposed South Dade Wellfield area protection zones. A new policy may be sought to limit the issuance of variances in wellfield protection zones. All other policies continue to be relevant and will remain unchanged.

Objective 4

The aquifer recharge and water storage capacity of the presently undeveloped areas in western and southern Miami-Dade County shall be maintained or increased.

CDMP Monitoring Measures. This objective is measured by the acreage of wetlands that are retained or created to enhance aquifer recharge/water storage capacity in Miami-Dade County.

Objective Achievement Analysis. The monitoring measure developed for this objective is the acreage of wetlands created to enhance aquifer recharge/water storage capacity in Miami-Dade County. During a review of this measure staff of the DERM suggested that wetlands or the creation of wetlands enhance water quality but do not necessarily enhance recharge or water storage capacity. DERM staff further suggested that this objective might be better measured by the implementation of cut and fill permits in what is known as Area "B"; an area defined through Design Memorandum V of the U.S. Army Corps of Engineers as "an area in Northwest and portions of Southwest Miami-Dade County having unique hydrological characteristics."

Lands in Area "B" lie adjacent to the Water Conservation Areas and have high groundwater levels relative to ground elevation, therefore stormwater ponds for long periods of time. The areas of ponded water cannot be rapidly drained due to an insufficient capacity in the eastern primary canal system to evacuate water during a storm event. Therefore development in these areas can only be permitted if provisions are made to allow these basins to retain on site the volumes generated by the design storm event.

Four basins in the western portion of Miami-Dade County have been identified as not being adequately drained by the eastern primary canal system: the North Trail, Bird Drive, Basin B and Western C-9 basins. In each of the basins, cut and fill criteria that ensures adequate retention of stormwater for necessary aquifer recharge, water storage and flood protection were developed, based on the common provision that developed sites must provide on-site retention from a 1 in 100 year storm. Cut and fill permits are issued to create stormwater lakes and dry retention areas necessary to meet the on-site retention requirement in these areas. However, smaller sites may not contain sufficient land to comply with these stormwater retention requirements. In such cases, mitigation funds are sought to purchase adjacent land, which can provide additional stormwater retention for this and other similar projects in the immediate area.

Table 2.4-5 shows by basin the number of permits issued, the amount of acres permitted for developed projects and the amount of area necessary for stormwater retention. Since computerized records of this information began in 1998, no comparison can be made to previous data.

Table 2.4-5
Estimated Cut and Fill Permit Data by Basin 1998-April 2003

Basin Name	Permits (number)	Project Size (acres)	Retention Area Required (acres)
Basin B	100	2,515.14	769.17
Bird Drive	198	3,978.19	1,035.15
North Trail	49	1,370.34	319.89
Western C-9	5	498.2	301.5
Total	352	8,361.87	2,425.71

Source: Department of Environmental Resources Management, Water Control Section, 2003

Based on the information presented, it appears that the cut and fill criteria is being implemented in the western basins areas and therefore aquifer recharge and water storage through lakes and dry retention recharge is being maintained or enhanced. This information indicates that Objective 4 has been achieved for the western portion of the County. Similar criteria may be developed for southern basins as more urban development occurs in these areas.

Elsewhere, in the already urbanized portions of the County, it is policy to retain as much runoff from a one in five year storm on-site as possible. Currently, the most widely used site development methods of on site stormwater control in Miami-Dade County include swales and exfiltration systems, the most common being French drain. These systems allow water to infiltrate into the aquifer thereby recharging the groundwater. Currently Miami-Dade County is mapping all stormwater systems in the unincorporated portion of the County. With approximately 50% of the mapping completed, an estimated 765,000 feet of French drains have been identified. Since these systems recharge the aquifer, Objective 4 appears to have been achieved for the urbanized portion of the county.

Policy Relevance. All policies under this objective continue to be relevant and will be retained. Policy 4E will be revised to include a more current statement regarding water reuse. Additionally, since it has been determined that wetlands improve water quality but may not be indicative of aquifer recharge or water storage, the monitoring measure for this objective should

be revised to include information on cut and fill permits in the various basin areas. A database including information on the number of permitted developments with insufficient land storage retention areas should be developed and tracked.

Objective 5

Miami-Dade County shall continue to develop and implement stormwater master plans and cut and fill criteria, as necessary, to provide adequate flood protection; correct system deficiencies in County maintained drainage facilities; coordinate the extension of facilities to meet future demands throughout the unincorporated area; and maintain and improve water quality. Plans for all basins in the County shall continue to be prepared sequentially with the last plans being completed by 2007, and sooner if additional funding is obtained, and implementing actions recommended in each basin plan shall commence immediately after the applicable plan is approved. Outside of the Urban Development Boundary the County shall not provide, or approve, additional drainage facilities that would impair flood protection to easterly developed areas of the County, exacerbate urban sprawl or reduce water storage.

CDMP Monitoring Measures. This objective will be measured by the number of stormwater master plans that have been completed and implemented, and the number of stormwater system improvements that have been made.

Objective Achievement Analysis. The need for flood protection in Miami-Dade County was heightened after several extreme rain events in 1999 and 2000 caused millions of dollars worth of property damage throughout the county. Currently the County's Stormwater Master Plan, incorporating basin plans for the 12 primary hydrologic basin plans as shown in Figure 2.4-5, is approximately 45% complete. Of the basin plans the northern three basins (C-7, C-8, and C-9) have been completed, the three southern basins (C-1, C-102, and C-103) are approximately 70% complete, and the three major central basins (C-100, C-4, and C-2) are less than 15% complete. The remaining three basins, Miami Canal (C-6), Coral Gables Waterway (C-3), and C-111, are scheduled to begin by 2004 with all basin plans being completed by December 2005, two years ahead of schedule. Basin C-5 is totally within a municipality and therefore will not be addressed by the County.

The basin master plans have been instrumental in identifying areas with less than one in ten year flood protection. Projects to correct areas with the most severe drainage problems in these basins are prioritized and scheduled, in part through the Miami-Dade County Stormwater Utility Capital Improvement Project Program. This program, administered through the DERM, is tasked with retrofitting storm drainage systems to maximize flood protection and minimize the impact of stormwater runoff into surface waters.

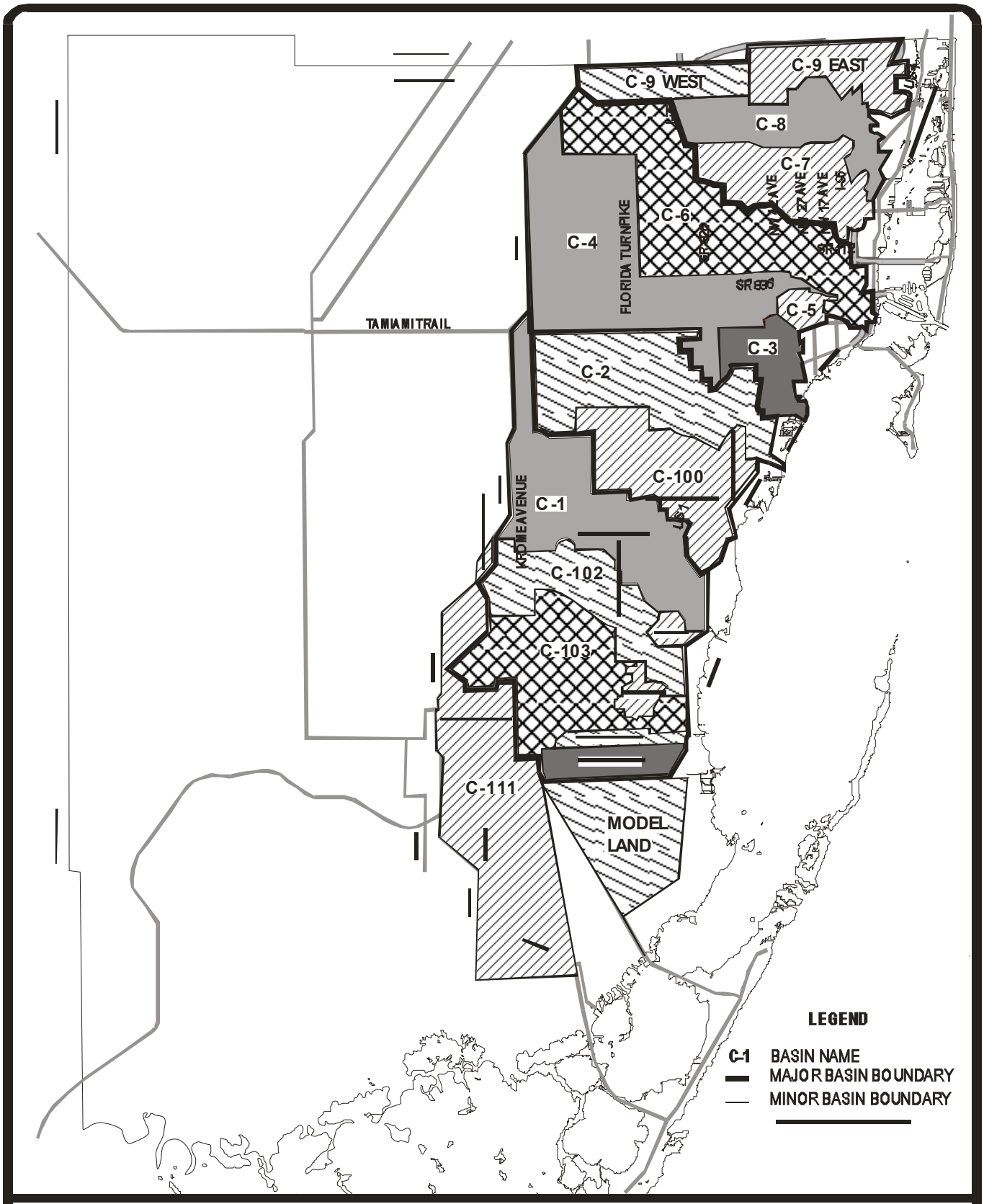


Figure 2.4-5

PRIMARY HYDROLOGIC BASINS

DEPARTMENT OF PLANNING AND ZONING 2003

As reported in the Miami-Dade County Stormwater Utility Capital Improvement Project Program Status Report, 103 projects have been completed or are proposed which will maximize flood protection and minimize the impacts of stormwater runoff on surface waters. Table 2.4-6 summarizes the Stormwater Utility Capital Improvement Projects, which have been completed and proposed since 1991. Although project budgets are shown, many of the projects span multiple years and therefore the budget figures are estimates only.

Table 2.4-6
Stormwater Utility Capital Improvement Project Funding

Fiscal Years	Number of Projects	Budget
1991-94	6	$4,799,000
1995-02	52	49,916,000
2002-03	25	38,391,000
Beyond 2003	20	259,912,000

Source: Department of Environmental Resources Management, 2003
Note: Budget figures may span more than one category and are therefore estimates only.

Based upon the number of Stormwater Master Plans completed or partially completed and the amount of stormwater facility improvements conducted through the Capital Improvements Program, this objective has been achieved.

Policy Relevance. The date of 2007 in the Objective should be revised to reflect a new date of 2005. Additional wording modifications should be made to reflect a more current status of the master plan process in this Objective. The pollutant target criteria as identified in Policy 5A should be updated to reflect the most recent criteria. Policy 5D will be reviewed to determine if the planning periods should be modified. All other policies continue to be relevant and will be retained. A new policy to encourage buffer areas between water impoundment areas and development to reduce the risk of flooding should be added.

Objective 6

Soils and mineral resources in Miami-Dade County shall be conserved and appropriately utilized in keeping with their intrinsic values.

CDMP Monitoring Measures. This objective will be measured by the number of acres that have been retained in agriculture and the acreage of open land areas where rockmining is an allowable use that are being actively mined.

Objective Achievement Analysis. Between 1995 and 2002, five applications for CDMP amendments were filed requesting a land use designation change from agriculture to a more intense urban form. Four of these applications were either withdrawn or denied and one application was approved. The approved application, adopted by the Board of County Commissioners in April 2000, converted 127.87 acres of agricultural land located inside the UDB to a combination of office, industrial and residential uses. This parcel was originally a portion of a 1990 application for development; however, in a settlement agreement with DCA, this parcel was left as agriculture since the CDMP Amendment applicant did not own this portion of the property. By 1999, with development existing to the west, south, and east, the

property was identified as an "infill" site, and therefore a land use redesignation was considered consistent with the CDMP. It should be noted that during the 1995-2002 timeframe, no agriculturally designated land outside the UDB was converted to an urban use.

Data collected from 1995 indicates that approximately 4,082 acres of land zoned as agricultural or general use has been rezoned to a higher density classification. Table 2.4-7 shows the number of rezonings per year broken into acreage categories. All rezonings have occurred within the urban development boundary (UDB) where such zoning is consistent with the CDMP.

Table 2.4-7
Agricultural Rezonings 1995-2002

Year	Rezonings < 20 acres		Rezonings > 20-<50acres		Rezonings >50 acres	
	Number of Applications	Acres	Number of Applications	Acres	Number of Applications	Acres
1995	15	58.83	3	97.89	2	183.82
1996	35	210.88	5	186.31	4	311
1997	3	12.48	0	0	0	0
1998	9	62.57	9	244.73	0	0
1999	11	83.70	3	99.9	0	0
2000	5	19.24	2	72.04	0	0
2001	10	26.94	2	79.39	3	1677.04
2002	46	181.99	5	158.19	4	302.42
Total	134	656.64	30	938.45	14	2474.28

Source: Department of Planning and Zoning, 2003

The above information indicates that Miami-Dade County has been successful in retaining agricultural uses outside the UDB as designated by the CDMP.

Rockmining is another major industry in Miami-Dade County. It is estimated that more than 50% of the rock used for construction and road building in the State of Florida comes from an 80 square mile area in the northwestern portion of the County. Each year approximately 300 acres of wetlands are transformed into lakes that are up to 80 feet deep. The limerock from the lake excavation is used to make asphalt, cement, roads, septic tank drainfields and treatment plant filters. As reported by the DERM, 15 new permits for rockmining in wetlands areas were issued since 1995, which brings the total to 33 active rockmining operations in wetlands areas. Between 1988 and 1994, permits were issued to allow approximately 4,044 acres to be mined in wetlands areas. Permits issued since 1994 will allow approximately 4,592 acres to be mined; an increase of approximately 13.6% from those approved during the previous EAR period. According to rockmining reports filed on an annual basis, over 2,900 acres of limerock were mined from quarry activities between 1995 and 2001.

The data presented above indicates that both rockmining and agriculture are important to Miami-Dade County's economy. Therefore this objective has been achieved.

Policy Relevance. All policies continue to be relevant and will be retained.

Objective 7

Miami-Dade County shall protect and preserve the biological and hydrological functions of the Future Wetlands identified in the Land Use Element. Future impacts to the biological functions of publicly and privately owned wetlands shall be mitigated. All privately owned wetlands identified by the South Florida Regional Planning Council as Natural Resources of Regional Significance and wetlands on Federal, State, or County land acquisition lists shall be supported as a high priority for public acquisition. Publicly acquired wetlands shall be restored and managed for their natural resource, habitat and hydrologic values.

CDMP Monitoring Measures. This objective will be measured by the acreage of wetlands that have been acquired and managed through the South Florida Water Management District Save Our Rivers Program, the Miami-Dade Environmentally Endangered Lands Program or other public land acquisition and management programs to preserve their wetland values.

Objective Achievement Analysis. In 1981 the Florida Legislature created the Save Our Rivers Program for the Water Management Districts to acquire environmentally sensitive lands. These areas are necessary to manage, protect and conserve the state's water resources. Currently five major areas have been slated for purchase under this program: East Coast Buffer, Biscayne Coastal Wetlands, Dade County Archipelago, Frog Pond/L-31, Model Lands Basin, and Southern Glades. Table 2.4-8 summarizes the number of acres in each area acquired through 2002. Since no data regarding these acquisitions was available in the 1995 EAR, a comparison of acquisition acres cannot be made. However, acquisition of land for approved CERP projects has significantly increased since authorization of CERP monies in 2000.

Table 2.4-8
Save Our River Miami-Dade County Acquisitions through September 2002

Project	Acres Acquired	Acres Approved for Acquisition	Percent of Acres Acquired
East Coast Buffer	35,836	70,883	50.55
Biscayne Coastal Wetlands	0	2,241*	0
Dade County Archipelago	375	556	67.45
Frog Pond/L-31	9,570	10,600	90.28
Model Lands Basin	3,927	44,999	8.73
Southern Glades	32,452	37,620	86.26
Total	82,160	166,899	49.23

Source: South Florida Water Management District, February 2003
*Figures overlap with CERP projects.

Many wetland and water management areas have been purchased through the Comprehensive Everglades Restoration Program (CERP). These areas have been purchased to help restore the Everglades to their natural water flow conditions and help to restore hydroperiods for wetland areas. Areas being purchased in Miami-Dade County are summarized in Table 2.4-9.

In addition to the above areas purchased by the State and Federal governments, the Miami-Dade County Environmentally Endangered Lands Program (EEL) has purchased 7,363 acres of freshwater wetlands and 600 acres of coastal wetlands for preservation between 1995 and 2002. The areas purchased by the EEL Program are identified in Figure 2.4-6.

Based upon all information as summarized above, it appears that this objective has been achieved.

Table 2.4-9
CERP Land Acquisitions in Miami-Dade County 2000-Dec. 2002

Project	Acres Acquired	Acres Approved for Acquisition	Percent of Acres Acquired
Biscayne Coastal Wetlands/C 111 Spreader	4,663	13,950*	33.43
Dade-Broward Lake Belt Region	0	990	0
North Lake Belt (Area I & II)	519	5,861	8.86
Central Lake Belt	238	5,770	4.12
Wastewater Reuse Pilot Project	0	1,000	0
Bird Drive Recharge Area	970	3,996	24.27
Total	6,390	31,567	20.24

Source: South Florida Water Management District, 2003
* Figures overlap with Save Our Rivers Program

Policy Relevance. All policies continue to be relevant and will be retained. . A new policy should be added seeking a dedicated source of funding for long-term management of EEL and Natural Areas. Additionally, a policy should be added to encourage the streamlining of wetlands permitting through the delegation of the permitting process from the SFWMD to Miami-Dade County. A new policy to encourage consistency between CERP objectives and requested wetland alteration projects should also be added.

Objective 8

Upland forests included on Miami-Dade County's Natural Forest Inventory shall be maintained and protected.

CDMP Monitoring Measures. This objective will be measured by the acreage of hammocks and pinelands, retained in public ownership or acquired by public land acquisition programs. Additional measures will include the number of sites where management plans have been, or are being implemented, the number of Endangered Lands Covenants and the number of sites and acreage retained in Natural Forest Communities.

Objective Achievement Analysis. This Objective has been implemented through the County's EEL Program, the County's EEL covenants, the natural areas management program administered by the Miami-Dade County Park and Recreation Department (PARD), and Chapter 24-60 of the County Code, which addresses natural forest communities and other tree resources. Through the EEL Program, 248 acres of pinelands and 142 acres of hammocks have been purchased since 1995 at a total acquisition cost of over $16,350,000 with over $4,200,000 being spent for management. EEL acquisition sites are shown in Figure 2.4-6. Additionally, DERM is currently implementing annual work plans on 43 EEL sites.

The DERM has initiated 16 new EEL covenants since 1995 to protect privately owned Natural Forest Communities. Through this program, a tax incentive is offered to land owners who do leave their forests undeveloped and manage them in accordance with an agreed to plan. Additionally, 26 EEL covenants have been renewed since 1995.

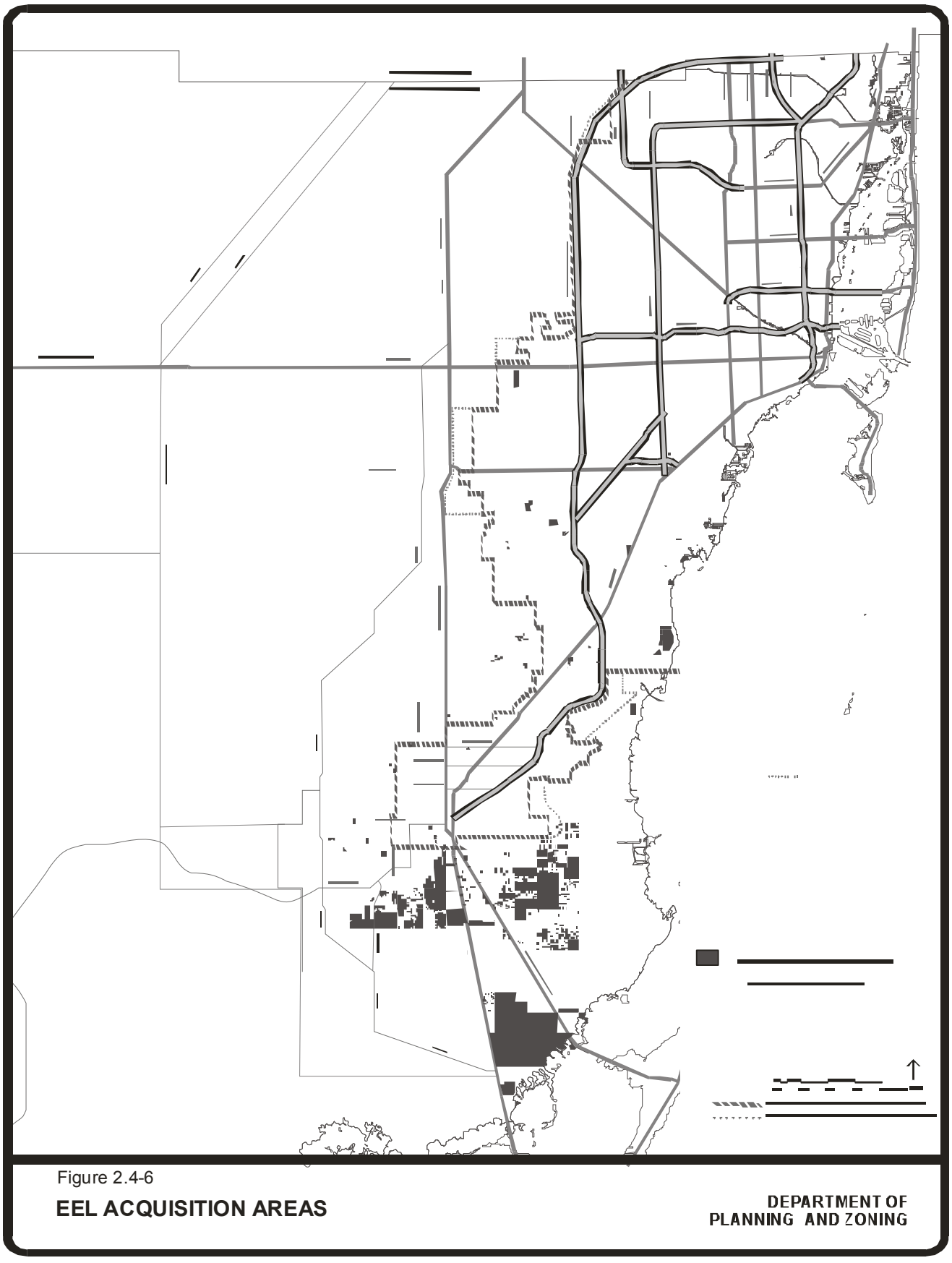


Figure 2.4-6

EEL ACQUISITION AREAS

DEPARTMENT OF PLANNING AND ZONING

Natural areas are managed by the PARD and include naturalist and other education programs. According to PARD, during the period from 1994 through 2001, natural areas management expenditures at approximately 28 park sites totaled $9,010,843.

Based upon the data presented above, this objective has been achieved.

Policy Relevance. Policy 8F addresses "controlled burns". It is believed that this language should be updated to more accurately address prescribed burns in forest lands. The listing of Exotic Species found in Policy 8I should be updated. All other policies continue to be relevant and will be retained. Miami-Dade County through the Landscape Code is seeking to increase the canopy cover of the County. The goal for this effort is a 30% canopy. It is believed a new policy concerning this effort should be included. Additionally, a new policy encouraging the creation of an assistance program for private NFC and EEL covenant holders should be added.

Objective 9

Freshwater fishes and wildlife shall be conserved and used in an environmentally sound manner and the net amount of habitat critical to federal, state or County designated endangered, threatened, or rare species or species of special concern shall be preserved.

CDMP Monitoring Measures. This objective will be measured by the net changes in the number of listed plant and animal species and the net changes in numbers of species in individual categories.

Objective Achievement Analysis. In the 1995 EAR, 15 fauna species, including Amphibians, reptiles, birds and mammals (excluding whales), found in Miami-Dade County were listed as Federal Endangered. An additional 7 species were listed as Threatened. As of December 1999, 10 federally listed endangered species and four federally listed threatened species reside in Miami-Dade County, a net decrease of five Endangered and one Threatened species. The Key Deer, Atlantic ridley turtle, Florida grasshopper sparrow, Ivory-billed woodpecker and Bachman's warbler, while still listed as Endangered species, are no longer shown as present in Miami-Dade County and the designation of the American Bald Eagle has been changed from an Endangered species to a Threatened species. Additionally, the Schaus swallowtail butterfly has been added to the Endangered species list as an invertebrate present in Miami-Dade County.

The decrease in the number of Endangered fauna in the County indicates that the population of several species listed for the County was so small that they may have been erroneously listed. An example of this is the Key Deer, which exist mainly on Big Pine Key in Monroe County and have rarely been sighted on the mainland.

As of December 2000, critical habitat was designated in Miami-Dade County for four of the endangered species: the American crocodile, the Cape Sable seaside sparrow, the Everglades snail kite and the West Indian manatee.

In an effort to increase the population of the West Indian manatee, Miami-Dade County developed and implemented a Manatee Protection Program; the program for the County was approved by the State of Florida in 1995. The County has contributed in excess of $400,000 to manatee protection efforts since that time. These funds, generated through boat registration fees, have been spent on manatee education, signage and enforcement. Additionally, Miami-Dade County has created the Virginia Key No Entry Zone, which prohibits motors and protects the sea grasses, the main habitat for the manatee.

The Leatherback, Hawksbill and Green sea turtles are currently listed on the Endangered species list and the Loggerhead sea turtle is considered Threatened. Miami-Dade County has implemented the Sea Turtle Program, administered by PARD, and provided annual funding to monitor turtle activities, relocate nests to hatcheries, care for sick and injured turtles, conduct an educational program and release hatchlings to the ocean. Since 1995 this program has released approximately 191,500 turtle hatchlings to the ocean.

The habitat of the Cape Sable seaside sparrow located in Taylor Slough is significantly impacted by long periods of flooding. As such the survival of this species has been the topic of much discussion related to the Comprehensive Everglades Restoration Projects. Due to a redesign of flood control project in the Taylor Slough area, the Cape Sable seaside sparrow have slowly increased in their numbers. In the 2000 Annual Report prepared by Stuart L. Pimms of the Center for Environmental Research and Conservation at Columbia University, the sparrow has increased in number from an estimated 2,656 in 1995 to an estimated 3,744 in 2000. Recovery plans for the Cape Sable seaside sparrow, Snail Kite, and Florida Panther have been prepared by the US Fish and Wildlife Service, since the habitats for these species are significantly impacted by the CERP projects.

The current federal list contains six Endangered plants from Miami-Dade County, the same number and species found on this list in 1995. As noted in the 1995 EAR, five of the six Endangered species are found in pineland habitats. The State list of Endangered and Threatened Plant Species of Miami-Dade County identifies a total of 173 Endangered species and 58 Threatened species.

Miami-Dade County's EEL acquisition efforts have helped preserved plant and fauna habitat for a variety of endangered species. Since 1995, approximately $59.5 million has been spent to acquire approximately 15,070 acres of EEL property, including hammocks, pinelands and wetland areas. This represents approximately 98% of the EEL properties acquired to date, and approximately 27% of the total acreage approved by the BCC for EEL acquisition. An additional estimated $4.8 million has been appropriated by Miami-Dade County for management of these properties with over $9 million spent on natural area management.

Based upon the information presented above, it appears that the objective has been achieved.

Policy Relevance. All policies continue to be relevant and will be retained. The lists of State and Federal Designated Endangered, Threatened and Potentially Endangered species as contained in Appendix A and B should be updated.

2.5. WATER, SEWER, AND SOLID WASTE ELEMENT

2.5.1 Water and Sewer Subelement

The Water and Sewer Subelement was established upon recommendations contained in the 1995 Evaluation and Appraisal Report for the Water, Sewer and Solid Waste Element of the Dade County Comprehensive Plan. Most of the monitoring measures described below, as a result, were newly established and baseline data may not necessarily be available. The best data available is therefore compared to current data in the evaluation that follows. Available data regarding capacity treated at the various facilities and systemwide will be used to assess performance. Results of calculations and measures regarding performance against objectives or the standard will be analyzed and changing circumstances and technologies or other problems will be considered. Any deviation from the stated objectives will be addressed.

Objective 1

In order to serve those areas where growth is encouraged and to discourage urban sprawl, the County shall plan and provide for potable water supply, and sanitary sewage disposal on a countywide basis in concert and in conformance with the future land use element of the comprehensive plan.

CDMP Monitoring Measure. Recommended measurement for potable water and sanitary service: geographic area outside of the Urban Development Boundary (UDB) served by water and sewer each year. Alternative measure for potable water: miles of water mains greater than 6 inches in diameter which exist outside of the UDB. Alternative measure for sanitary sewer: miles of sewer force mains which exist outside of the UDB. Source of alternative measure: Miami-Dade Water and Sewer Department Water and Sewer Atlases. It should be noted that the alternative measurements will overestimate system development outside of the UDB, as they will count water and sewer mains located outside the UDB, but not used for local service. The use of the alternative measurements will have to correct for this bias.

Objective 1 Achievement Analysis. Policies within Objective 1 designate areas within the Urban Development Boundary (UDB) as having first priority in receiving potable water supply and sanitary sewer service, with future development within the Urban Expansion Area having second priority. Implementation in 1995 was determined to be highly successful, with only two exceptions to the policy, an area south of the Homestead Air Reserve Base and the Everglades Migrant Labor Camp located southwest of Florida City. These services were provided by a private utility, which has since been acquired by the Miami-Dade Water and Sewer Department (WASD). Sanitary sewer service was also provided to the Everglades Migrant Labor Camp and the neighboring State Correctional Facility to protect the public health and safety.

Potable water service in 2003, in addition to the two locations noted above, is now also provided several facilities located outside the UDB. These facilities are listed below with an identification number, which coincides to the facility's location as noted in Figure 2.5.1-1.

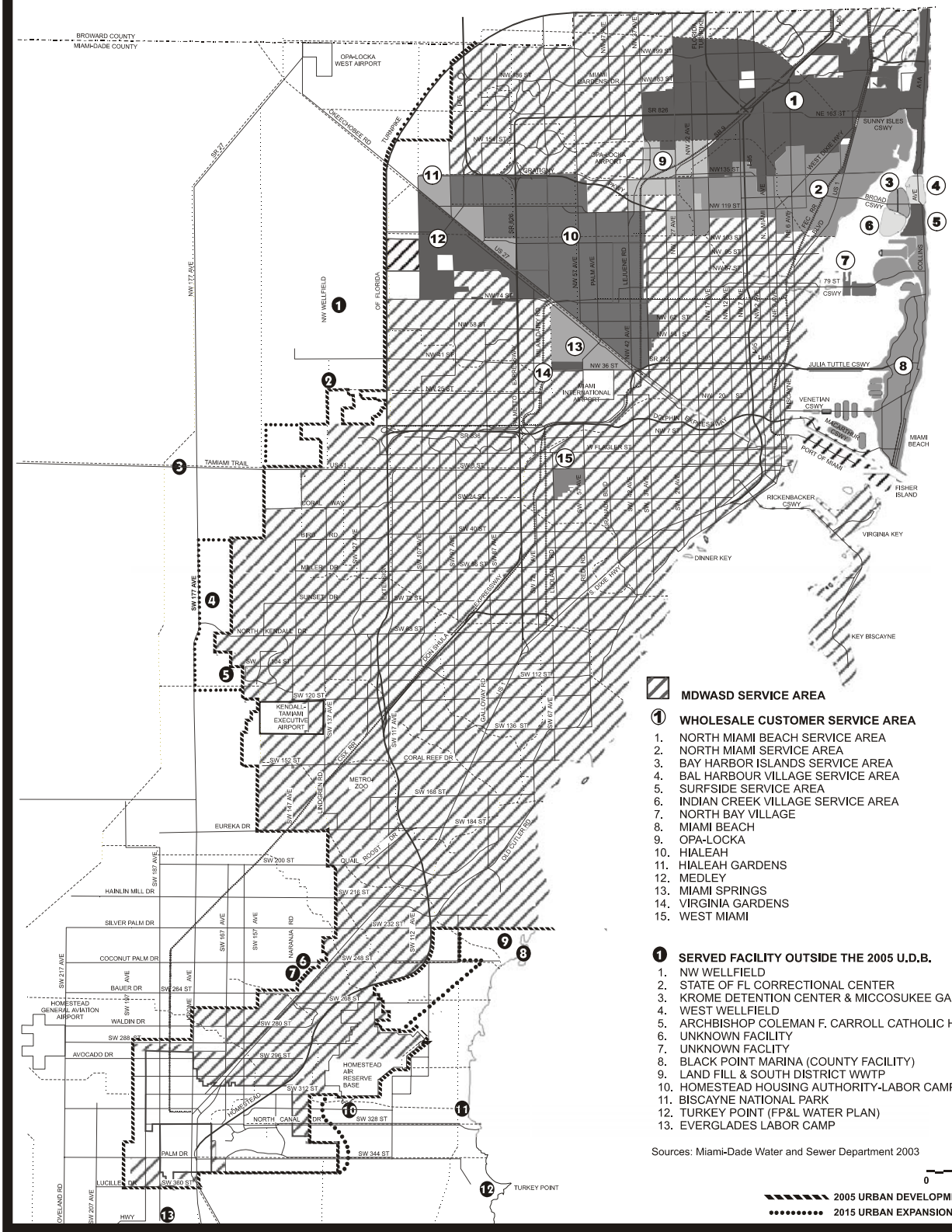


Figure 2.5.1-1

2003 MDWASD WATER SERVICE AREAS

DEPARTMENT OF PLANNING AND ZONING

2003EARale/Rev 110403

- WASD's Northwest Wellfield (identified as #1)
- Krome Service Processing Center of the Federal Bureau of Citizenship and Immigration Services (identified as #3)
- Miccosukee Gaming and Resort Center (identified as #3)
- Archbishop Coleman F. Carroll Catholic High School (identified as #5)
- WASD's West Wellfield (identified as #4)
- The State of Florida Correctional Facility (identified as #2)
- South District Wastewater Treatment Plant (identified as #8)
- South Dade Landfill (identified as #8)
- Black Point Marina County Park (identified as #9)
- Homestead Bayfront County Park (identified as #11)
- Biscayne National Park (identified as #11)
- Florida Power & Light's Turkey Point Power Plant (identified as #12)
- Homestead Housing Authority residential facility (identified as #10)
- Everglades Labor Camp (identified as #13)

Locations 6 and 7 have not been verified as serving a use outside the UDB; however, these appear to represent waterlines that were extended past the UDB to enhance flow. For lines outside the UDB, there are notations made in the Water and Sewer Atlases. The connection for the State correctional facility is explicitly noted that no additional connection is allowed to that main.

Sanitary sewer service is provided to Krome Service Processing Center, the Miccosukee Resort and Gaming Center, Archbishop Carroll Catholic High School, the West Wellfield, the State Correctional Facility near NW 41 Street, the South Dade Landfill, as well as the Everglades Migrant Labor Camp and neighboring State Correctional Facility, located southwest of Florida City, that were served in 1995. Sanitary sewer areas serviced in Miami-Dade County are depicted in Figure 2.5.1-2.

Analysis indicates progress toward achievement and a continued need for the objective and its policies. While service to areas outside of the UDB is not widespread, the potential exists that additional service could be provided, inasmuch as several water and sanitary sewer mains are extended to facilities existing outside of the UDB. These facilities, which include the Miccosukee resort, the Krome immigration facility, and Archbishop Carroll High School, could foster increased and untimely development along Krome Avenue and in West Kendall. This distinct possibility was the reason that Policy 1H was proposed and approved as an amendment to the CDMP in the April 1998 cycle of amendment applications to the CDMP. As was stated in the Initial Recommendations Report among the Principal Reasons for Recommendation:

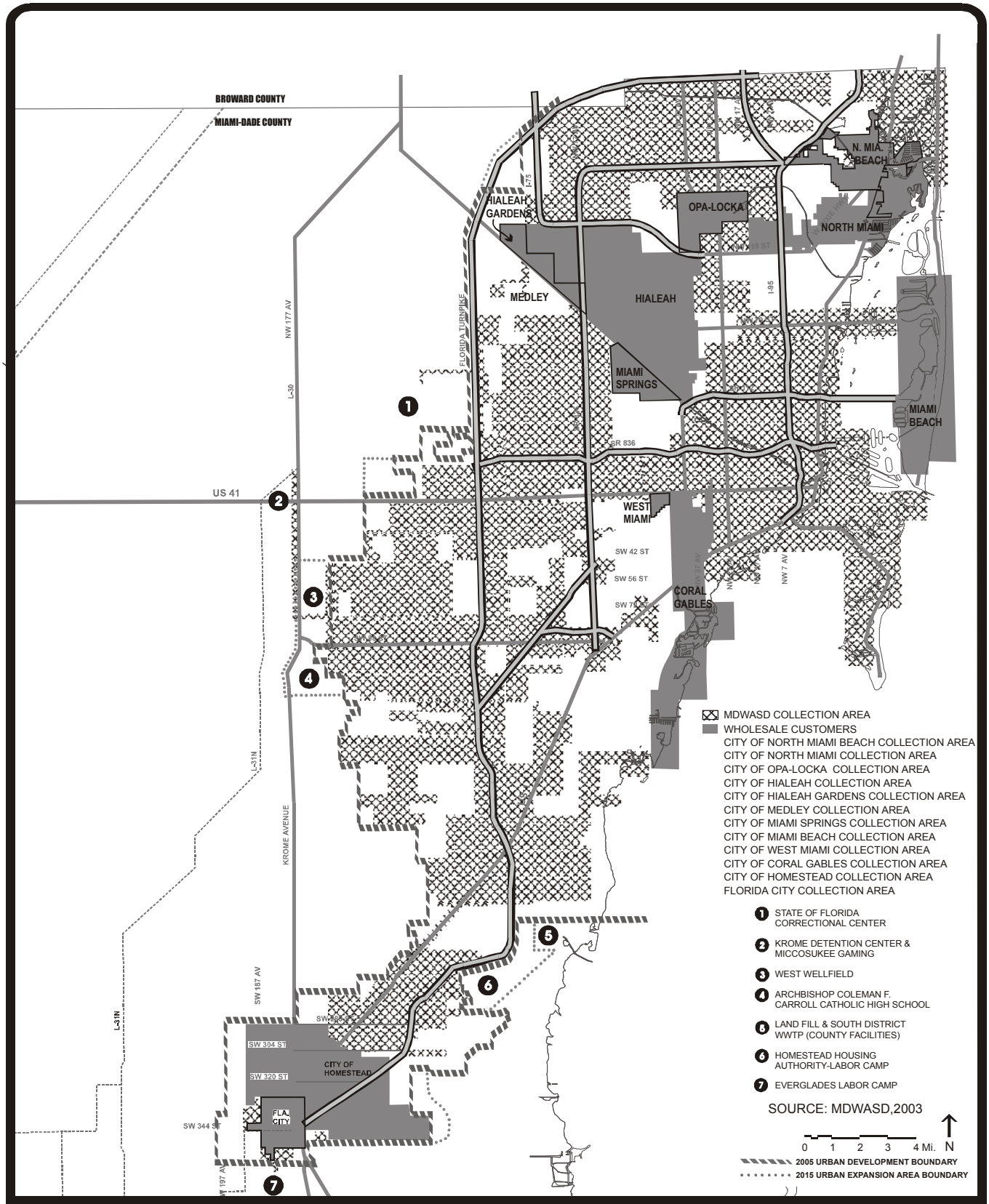


Figure 2.5.1-2

MDWASD SANITARY SEWER COLLECTION AREAS

DEPARTMENT OF PLANNING AND ZONING

1. This application was filed to help ensure that environmental regulatory activities of the County do not unnecessarily induce development of farmland, wetlands, and water recharge areas that is inconsistent with the CDMP Land Use Element. County regulatory requirements for installation of utility facilities such as water and sewer lines to serve specific parcels outside the UDB can induce development which might not have otherwise occurred on intervening land adjoining the water or sewer lines, and beyond. For this and other reasons, the CDMP currently contains policies that discourage the extension of urban infrastructure at public expense outside the Urban Development Boundary. However, CDMP policies do not currently address the extension of water and sewer lines at private expense outside the UDB. The proposed new policy is intended to discourage regulatory agencies from requiring the extension of water and sewer lines through agricultural and other areas outside the UDB, if safe alternatives exist, even if most of the cost of constructing such extensions would be borne by the private developer.

   Water and sewer extensions may be requested to serve either public or private developments in non-urban areas. Public agencies may need to build such public necessities as prisons, airports or other institutional uses in remote areas. Private requests may derive from remnants of urban zoning that predated adoption of the CDMP but which was not successfully rolled back to a non-urban classification. Whether public or private, residential or non-residential, in most situations outside the UDB where parcel sizes are relatively large and flexible, a reasonable range of uses can be accommodated on property having non-agricultural zoning using on-site water and wastewater disposal facilities without compromising public health or safety.

   Adoption of this policy would encourage County departments and boards to consider approving alternative on-site methods of water supply and wastewater disposal without compromising public health or safety. This would also encourage a minor amendment to the "feasible distance" provisions in Chapter 24 of the Code to authorize safe alternatives outside the UDB.

2. Changes from the language originally proposed are now recommended to address concerns expressed by the Miami-Dade Water and Sewer Department. A principal concern was that if restrictions are placed on the sizing of utility lines to serve a single use, or as a strategy to impede development, in the future when the area is opened to development by future CDMP amendment, the deficient lines will have to be replaced or paralleled by redundant lines to property serve the area, at an avoidable increased cost. Problems such as this have, in fact, happened in the past in areas where the location of the UDB was moved by subsequent Plan amendment. Because the UDB is not a permanent future development boundary, the Department concurs and recommends that the original proposal be changed so that the current County requirements that new lines be sized to accommodate possible future development of adjacent areas would remain unaffected.

> However, this reemphasizes the need to encourage safe alternatives to such urban infrastructure, until such time as the County Commission adopts policy to urbanize the subject area by amendment to the Land Use Element (Initial Recommendations, April 1998 Applications to Amend the Comprehensive Development Master Plan, August 25, 1998, pages 22-23).

The other facilities that receive service are not seen here to potentially encourage further development as the above-named facilities. Potable water that is provided to Black Point Marina, Homestead Bayfront Park, Biscayne National Park, Homestead Air Reserve Base, and Turkey Point, for example, occurs in areas where the salt water interface has pushed inland. The five facilities are large institutional uses that are located along the coastline and in unpopulated areas for specific reasons due to their operation, and could not exist without potable water.

To further the objective more in the future, additional or revised policies may be appropriate here and in concert with those under Objective 3 that would strengthen the intention to provide service within the UDB and only outside of the urbanized area when extreme circumstances warrant.

Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained.

Objective 2

The County will maintain procedures to ensure that any facility deficiencies are corrected and that adequate facility capacity will be available to meet future needs.

CDMP Monitoring Measure. The achievement of the LOS standards is their own monitoring measures. For the entire objective, the following measures are recommended: treatment plant capacity for the system (water and sewer); reserve capacity of raw and treated water (water); amount of areas of inadequate fire flow (water). Treatment plant capacity is monitored and published by WASD regularly, and does not require an alternative. Other alternative measures include: percent water unaccounted for; ratio of peak demand to average demand treatment capacity for individual treatment plants.

Objective 2 Achievement Analysis. The 1995 EAR discussed the objective separately for potable water and included: system capacity, water pressure and fire flow, water quality, water storage, and raw water reserve. Sanitary sewer analysis included: system capacity, effluent quality, and peak load adequacy. System capacity for potable water was met continuously over the entire period. Water pressure and requisite fire flow were considered adequate for the County overall although three areas continued to have problems, which typically occurred in older neighborhoods. The federal, State, and County primary water quality standards and the water storage standard had also been met continuously since 1988, according to reporting from WASD and DERM.

In 2002, systemwide water treatment plant capacity was 454.77 million gallons per day, as shown in Table 2.5.1-1, below. The peak water demand in 2002 was 391.3 million gallons, according to data in Table 2.5.1-2. To meet the LOS standard of operation, the rated capacity

(also called maximum daily capacity) of the system must be no less than 2 percent above the maximum daily demand (or peak demand) for the preceding year. Using this LOS, the current capacity of the regional system must be at least 399.13 MGD, which is met. A second portion of the LOS is that the systemwide rated capacity must similarly be 2 percent above the average daily system demand for the preceding 5 years. The rated capacity systemwide in 1995, at the time of the last EAR, was 427.6 MGD, easily meeting the standard: average systemwide demand in 1990-1994 was 317.35 MGD, and 102 percent of that was 323.70 MGD. Systemwide capacity in 2002 and 2003 of 454.77 MGD is more than average daily demand for the past five years of 337.97 MGD, 102 percent of which is 344.73 MGD. The highest average demand of 346.1 MGD was in 2000 – again, systemwide capacity of 454.77 MGD was well in excess of demand.

The LOS standard, as written, incorrectly mixes systemwide measurement with per capita measurement. Average daily systemwide capacity is measured in the hundreds of millions of gallons while average daily per capita demand is measured in the hundreds of gallons. Systemwide capacity is therefore compared to systemwide demand in this analysis without consideration of per capita demand.

Table 2.5.1-1
Capacity of County and Municipal
Water Treatment Plants, 2002

Plant	Rated Capacity (MGD)	Average Day Production (MGD)	Maximum Day Production (MGD)	Available Capacity (MGD)
COUNTY				
REGIONAL SYSTEM TOTAL				
Hialeah/Preston	225.00	160.6	189.9	35.10
Alexander Orr	217.74	169.44	197.5	20.24
SOUTH DADE SYSTEM TOTAL				
South Dade System (6 plants-Former Rex)	12.03	6.7	8.8	3.23
WASD TOTAL	454.77	336.74	396.2	58.57

Source: Miami-Dade Water and Sewer Department, 2002
MGD = Million Gallons per Day
ASR = Aquifer Storage and Recovery

Table 2.5.1-2
Demand and Service Data, WASD Water System
1995-2002

Year	Population Served (thousands)	Peak Demand (MGD)	Average Demand (MGD)	102 Pct., Prev. Yr. Avg. Dmd.	Gallons Per Cap. Per Day	Peak to Ave. Ratio
1995[1]	1,906	382.3	341.1		179	1.12
1996	1,928	363.9	343.1	347.9	178	1.06
1997	1,967	370.9	340.3	350.0	173	1.09
1998	1,999	383.1	343.8	347.1	172	1.11
1999	2,032	391.3	341.3	350.7	168	1.15
2000[1]	2,062	378.2	346.1	348.1	168	1.09
2001	2,092	345.6	321.0	353.0	153	1.08
2002	2,122	391.3	336.7	327.4	159	1.16
5-Year Average	2,061	377.90	337.97	344.73	164	1.12

MGD= Million Gallons per Day

Source: Miami-Dade Water and Sewer Department, 2002

(1) Population data from 2000 to 2002 based on interpolating data included in the WASD Water facilities Master Plan between 1999 and 2005.

Note: 5-year Average Demand is the average of monthly figures reported for the period 1995-March 2003, and is not simply the mean of the Average Demand for the 5 pervious years.

An evaluation of the projected rated system water capacities and the estimated maximum demand of the system is summarized in Table 2.5.1-3

Table 2.5.1-3
WASD Water System
Capacity and Demand Comparison
1995-2020

Year	Maximum Day Capacity (MGD)	102 Pct. Of Max. Day Demand (MGD) for the Preceding Year
1995	427.60	396.78
2000	454.77	399.13
2005	495.03[1]	451.55
2010	520.03 [2]	487.36
2015	563.03 [3][4]	517.34
2020	563.03	547.74

Source: Miami-Dade Water and Sewer Department

MGD= Million Gallons per Day

[1] Hialeah-Preston Re-rate - 10 MGD, Alexander-Orr Re-rate-30.26 MGD

[2] New South Dade membrane softening Water Treatment Plant – 25 MGD

[3] New membrane softening Water Treatment Plant in the North West Wellfield Area = 13 MGD

[4] Alexander-Orr Re-rate - 30 MGD

The monitoring measure, which evaluates the reserve, or storage capacity, for raw and treated potable water, is new for the 2003 EAR. Reserve capacity of raw water is discussed along with Aquifer Storage and Recovery (ASR) under Objective 6. The LOS standard for a storage capacity for finished water, as currently included in Objective 2, is no less than 15 percent of the Countywide average daily demand.

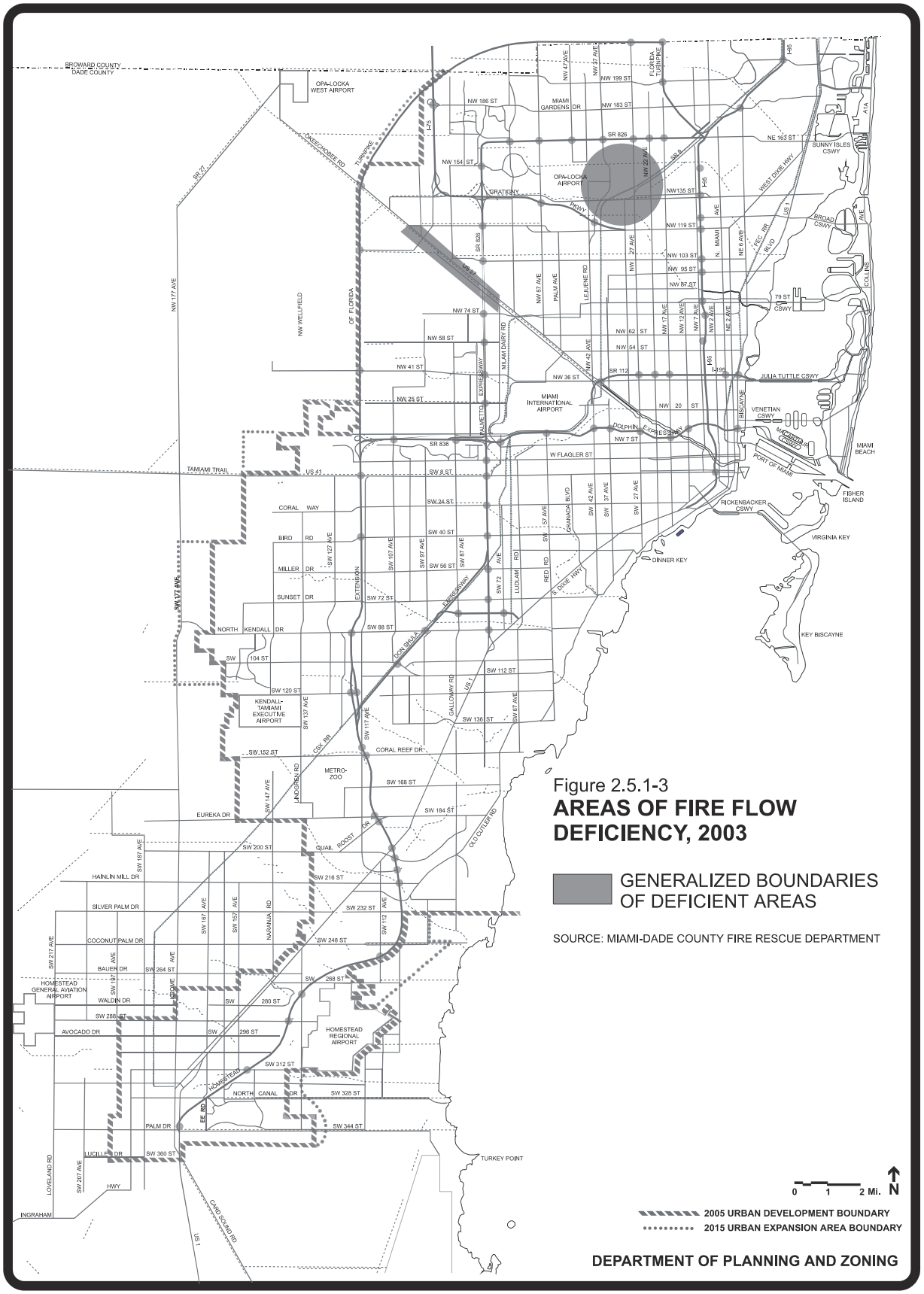
Finished, or treated, water, in the County is generally stored in ground reservoirs or elevated tanks, and storage systems are usually equipped with pumps and valves for operation. Finished water storage allows the system to meet domestic, industrial, and fire demands. WASD uses the finished water storage system to provide water during source or pump failures, as well.

According to WASD, the finished water storage capacity standard of 15 percent has been met continuously since 1995. Finished water storage capacity of 93.8 million gallons was available at the Hialeah-Preston and Alexander Orr Water Treatment Plants in 2002. The storage capacity represented 27.9 percent of the County system's average daily demand in 2002, almost double the 15 percent specified in the LOS standard.

Under Policy 2A of the Water and Sewer Subelement, water pressure of between 20 and 100 pounds per square inch (psi) is to be delivered to users, with a schedule of minimum fire flows based upon land uses served. These minimum fire flows include 500 gallons per minute (gpm) for Single Family Residential/Estate uses, to 3,000 gpm for Business and Industry uses. Figure 2.5.1-3 indicates areas of inadequate fire flow. Only two such areas remain in the County, one along Okeechobee Road, in Northwest Miami-Dade County, and another generalized area in Opa-Locka. The Miami-Dade Fire Rescue Department reports that efforts are ongoing to mitigate the problem. The Biscayne Boulevard corridor, from NE 103 Street to the Broward County border, was previously included in the above list of inadequate fire flow areas; improvements to the water distribution system have allowed this area to be removed from the list.

An additional LOS standard for water treatment is that water quality shall meet all federal, State, and County primary standards for potable water. Responsibility for monitoring and reporting on potable water quality belongs jointly to the Miami-Dade County Department of Environmental Resources Management and WASD. Water quality has met federal, State, and County primary standards since the adoption of the 1995 EAR, according to WASD.

The County's adopted LOS standard for wastewater treatment and disposal requires that the regional wastewater treatment and disposal system operate with a capacity which is two percent above the average daily per capita flow for the preceding five years and a physical capacity of no less than the annual average daily sewer flow. The wastewater effluent must also meet all applicable federal, State, and County standards and all treatment plants must maintain the capacity to treat peak flows without overflow. It must be noted here, similarly to potable water, that requiring treatment for 102 percent of sewage system demand should be systemwide and not measured against per capita demand and the LOS should be changed.


BROWARD COUNTY
DADE COUNTY
OPA-LOCKA WEST AIRPORT
OKEECHOBEE RD
TURNPIKE
SW 77
NW 177 AVE
NW WELLFIELD
OF FLORIDA
NW 186 ST
NW 154 ST
NW 74 ST
NW 58 ST
NW 41 ST
NW 25 ST
TAMIAMI TRAIL
US 41
SW 8 ST
SW 24 ST
SW 40 ST
SW 56 ST
SW 72 ST
SW 88 ST
SW 104 ST
SW 120 ST
SW 136 ST
SW 152 ST
SW 168 ST
SW 184 ST
SW 200 ST
SW 216 ST
SW 232 ST
SW 248 ST
SW 264 ST
SW 280 ST
SW 296 ST
SW 312 ST
SW 328 ST
SW 344 ST
SW 360 ST
CORAL WAY
BIRD RD
MILLER DR
SUNSET DR
NORTH KENDALL DR
SW 127 AVE
SW 107 AVE
SW 97 AVE
SW 87 AVE
SW 137 AVE
SW 147 AVE
SW 157 AVE
SW 167 AVE
SW 177 AVE
SW 187 AVE
SW 197 AVE
SW 207 AVE
SW 217 AVE
KENDALL-TAMIAMI EXECUTIVE AIRPORT
METRO-ZOO
HAINLIN MILL DR
SILVER PALM DR
COCONUT PALM DR
BAUER DR
WALDIN DR
AVOCADO DR
HOMESTEAD GENERAL AVIATION AIRPORT
HOMESTEAD REGIONAL AIRPORT
EUREKA DR
QUAIL ROOST DR
CORAL REEF DR
NARANJA RD
LUCILLE DR
PALM DR
NORTH CANAL DR
HOMESTEAD
EE RD
LOVELAND RD
INGRAHAM
HWY
CARD SOUND RD
US 1
TURKEY POINT
OPA-LOCKA AIRPORT
MIAMI GARDENS DR
NW 199 ST
NW 183 ST
SR 826
NW135 ST
NW 119 ST
NW 103 ST
NW 95 ST
NW 87 ST
NW 62 ST
NW 54 ST
NW 36 ST
SR 112
NW 20 ST
NW 7 ST
W FLAGLER ST
SR 836
MIAMI INTERNATIONAL AIRPORT
DOLPHIN EXPRESSWAY
PALMETTO EXPRESSWAY
MILAM DAIRY RD
LEJEUNE RD
PALM AVE
NW 57 AVE
NW 42 AVE
NW 37 AVE
NW 27 AVE
NW 22 AVE
NW 17 AVE
NW 12 AVE
NW 7 AVE
NW 2 AVE
NE 2 AVE
NE 6 AVE
N MIAMI AVE
BISCAYNE BLVD
FLORIDA TURNPIKE
I-95
I-195
SR 9
SR 826
SR 7
SUNNY ISLES CSWY
WEST DIXIE HWY
US 1
BROAD CSWY
79 ST CSWY
COLLINS AVE
JULIA TUTTLE CSWY
VENETIAN CSWY
MACARTHUR CSWY
MIAMI BEACH
PORT OF MIAMI
FISHER ISLAND
RICKENBACKER CSWY
VIRGINIA KEY
DINNER KEY
KEY BISCAYNE
SW 57 AVE
GRANADA BLVD
SW 42 AVE
SW 37 AVE
SW 27 AVE
RED RD
LUDLAM RD
S DIXIE HWY
SW 72 ST
DON SHULA EXPRESSWAY
SW 117 AVE
GALLOWAY RD
SW 87 AVE
CSX RR
LINDGREN RD
SW 147 AVE
OLD CUTLER RD
SW 112 AVE
SW 107 AVE
SW 97 AVE
SW 87 AVE
SW 127 AVE
SW 137 AVE
SW 147 AVE
SW 157 AVE
SW 167 AVE
SW 177 AVE
SW 187 AVE
SW 197 AVE
SW 207 AVE
SW 217 AVE
Figure 2.5.1-3
AREAS OF FIRE FLOW DEFICIENCY, 2003
GENERALIZED BOUNDARIES OF DEFICIENT AREAS
SOURCE: MIAMI-DADE COUNTY FIRE RESCUE DEPARTMENT
0 1 2 Mi.
N
2005 URBAN DEVELOPMENT BOUNDARY
2015 URBAN EXPANSION AREA BOUNDARY
DEPARTMENT OF PLANNING AND ZONING

2003EARale

The systemwide capacity in 2003 of 352.50 MGD is more than average daily demand for the past five years of 304.71 MGD, 102 percent of which is 310.81 MGD. The highest average flow of 318.02MGD was in 1999 – systemwide capacity of 352.50 MGD was well in excess of demand. Table 2.5.1-4 demonstrates that LOS for sanitary sewer has been achieved.

Table 2.5.1-4
WASD Regional Wastewater System
Capacity and Demand Comparison 1995-2002

Year	Treatment Capacity (MGD)	102 Percent of Previous Year's Average Daily Flow (MGD)	Average Daily Flow (MGD)
1995	340.50	331.52	314.78
1996	340.50	321.08	307.22
1997	340.50	313.36	317.47
1998	352.50	323.82	308.72
1999	352.50	314.89	318.02
2000	352.50	324.38	311.99
2001	352.50	318.23	302.44
2002	352.50	308.49	293.42
5-Year Average	352.50	310.81	304.71

Source: Miami-Dade Water and Sewer Department, 2003
MGD = Million Gallons per Day
Note: 5-year Average Demand is the average of monthly figures reported for the period 1995-March 2003, and is not simply the mean of the Average Demand for the 5 pervious years.

WASD operates three regional wastewater treatment plants in the North, Central and South Districts. Because the system is interconnected, the service districts, shown in Figure 2.5.1-4 have flexible boundaries, and some flows from one district can be diverted to other plants in the system. In addition, there has been a significant reduction in average flow into the regional system as the result of extensive infiltration and inflow prevention work since 1994. To date, wastewater flow reductions of over 123 MGD have been achieved.

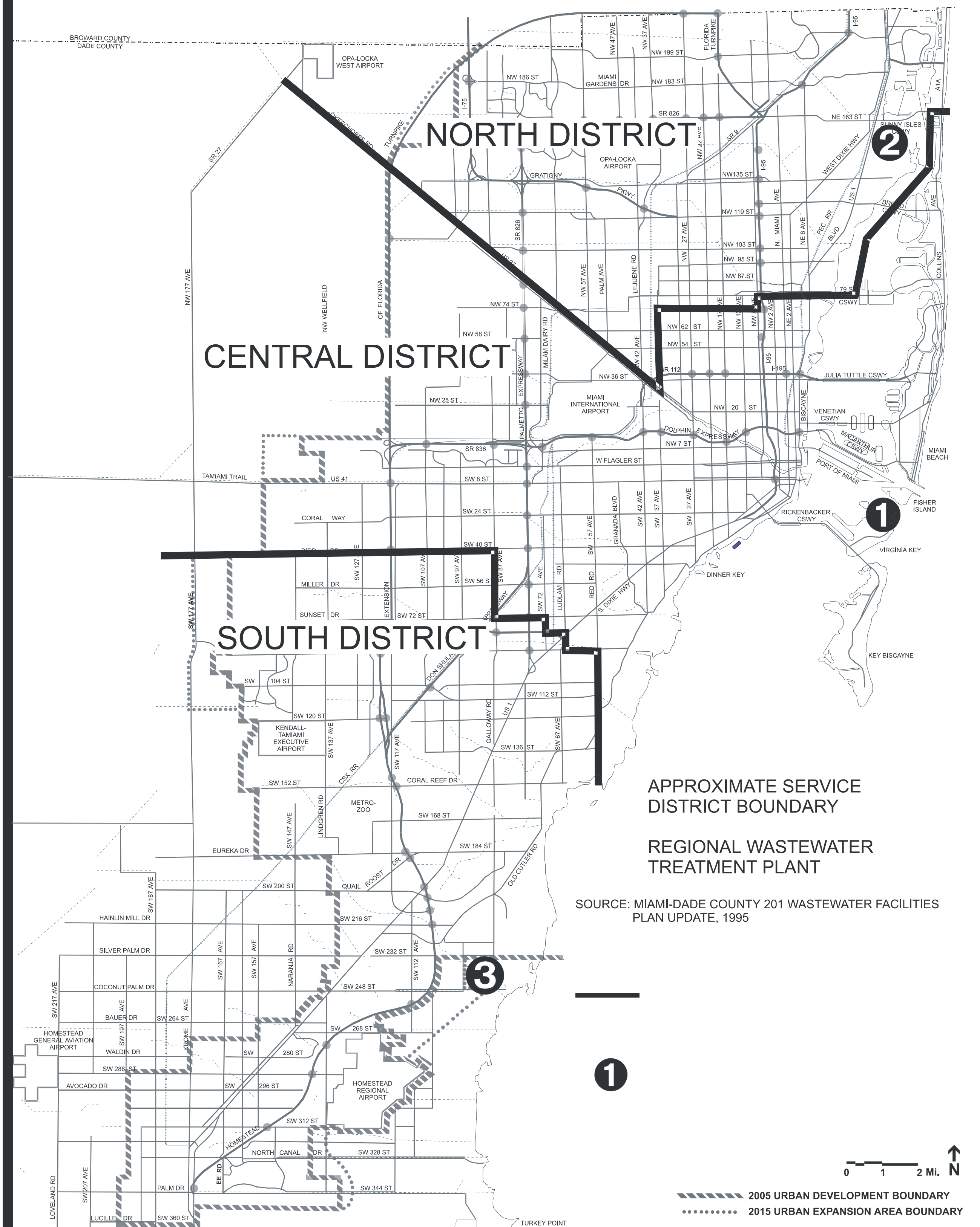


Figure 2.5.1-4

SERVICE DISTRICTS REGIONAL WASTEWATER TREATMENT PLANTS 2000-2015

DEPARTMENT OF PLANNING AND ZONING

Enforcement actions brought against Miami-Dade County by the State of Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (EPA) led Miami-Dade County in the mid-1990s to agree to construct more than $1.169 billion worth of improvements to its wastewater treatment plants, transmission mains and sewage collection system. Major improvements included construction of a new Biscayne Bay sewer line, a force main interceptor in Flagler Street, a South Miami-Dade transmission main and new mains in North Miami-Dade. The County is subject to fines of $10,000 per day if it fails to complete the needed improvements on schedule. As of May 2003 the County is in compliance with all agreements.

Furthermore, concerns have been raised since the 1995 EAR over the discovery of ammonia at a depth of 1,500 feet where treated wastewater was conveyed through Underground Injection wells located at the site of the South District Wastewater Treatment Plant. In 1997, the County entered into an agreement with the EPA and FDEP to perform science-based studies to determine the cause of fluid movement. In 2002, EPA terminated the agreement and the County commenced negotiations with FDEP to address the environmental issues at the South District facility. A draft Consent Order (CO) has been completed which addresses compliance by providing additional treatment to the secondary effluent prior to injection. The CO was approved by the Miami-Dade County Board of County Commissioners in July 2003 and is anticipated to be effective by September 15, 2003.

Analysis of the measurements for this objective indicates that there has been progress in achievement. Miami-Dade County has continued to maintain sufficient capacity in both the regional water and wastewater system to meet demand. Level of Service standards have generally been met throughout the reporting period, and additional policies under the objective have also exhibited progress. It is anticipated that the objective and its policies remain largely unchanged, with the exception of misleading language that is present in Policy 2A(a). That policy calls upon the regional water treatment system to maintain average daily system capacity, measured in the millions of gallons, at two percent more than the average daily per capita system demand for the preceding five years, which is measured in hundreds of gallons.

Policy Relevance. The policies under Objective 2 were reviewed for continued relevance. Listed below are those policies requiring slight modifications or other changes.

Policy 2A.1(a) and 2A.2(c). Both sections of the policy, referring to both the regional potable water supply treatment system and regional wastewater treatment system, call for system capacity to exceed by two percent the average daily per capita system demand. This policy should be reworded to clarify the process for achieving the LOS and should remove the term "per capita".

Policy 2E. The policy is concerned with the County's policy of installing oversize water and sewer mains and associated facilities in anticipation of future needs, as an efficiency measure. The policy, however, presumes, and may in fact induce, further growth out toward the urban fringe. A suggested modification would adjust this policy in terms of distance of development

from the Urban Development Boundary, while fully understanding that such boundary is not a static, immutable border beyond which development may never grow.

Policy 2F. The policy calls upon the Water and Sewer Department to continue expansion of regional water and wastewater treatment plants to meet demand through the year 2015. A modification is suggested to direct that expansion be continued to reflect demand through the duration of the CDMP or appropriate water and wastewater facilities master plans, whichever is longer.

Objective 3

The County will provide an adequate level of service for public facilities to meet both existing and projected needs as identified in this plan through implementation of those projects listed in the Capital Improvements Element. All improvements for replacement, expansion or increase in capacity of facilities shall conform with the adopted policies of this Plan including level of service standards for the facilities.

CDMP Monitoring Measure. The measurements recommended are the list of capital projects included in the Capital Improvements Element and completed projects.

Objective Achievement Analysis. Currently programmed capital water projects are listed in Table 2.5.1-5, below, and total more than $883 million. This includes more than $148 million in distribution system extensions, almost $124 million spent on wellfield improvements, $112 million for improvements related to 1996 amendments to the federal Safe Drinking Water Act, $101 million for equipment and vehicles, and $85 million for the new South Miami Heights Water Treatment Plant and wellfield. Water projects that cost $129,397,682.35 were completed during the fiscal years October 1, 1995 through September 30, 2002.

Table 2.5.1-5
WASD Regional Water System
Capital Improvement Plan, 2002-2008
(in thousands of dollars)

Project Description	Past Years	Fiscal Year Ending 2003	2004	2005	2006	Future	Project Cost	Completion
Hialeah/Preston Improvements	193	1,525	6,100	4,703	2,175	11,825	26,521	Future
Alexander Orr Jr. Expansion	12,033	3,287	801	0	0	11,500	27,621	Future
Wellfield Improvements	5,701	11,734	16,347	13,090	15,475	61,638	123,985	Future
North Miami-Dade Transmission Mains	1,375	1,445	5,300	3,800	300	4,700	16,920	Future
Central Miami-Dade Transmission Mains	385	3,775	1,087	0	0	28,500	33,747	Future
Connection to Florida Keys	900	3,000	3,000	0	0	0	6,900	2004
16-inch Main to Turkey Point	0	300	1,000	2,000	300	0	3,600	2006
Special Construction - Improvements	985	2,000	1,500	1,500	1,500	3,000	10,485	Future
Mains Intermediate Size	0	0	0	0	0	6,000	6,000	Future
Hialeah-Preston Carbon Dioxide	2,671	966	0	0	0	0	3,637	2003
General Maintenance and Office Facilities	2,242	954	10,825	1,775	200	6,800	22,796	Future
Distribution System Extension Improvements	35,912	17,183	19,000	19,000	19,000	38,000	148,095	Future
Fire Hydrant Install & Related System Betterments	2,846	1,770	1,510	1,500	1,500	15,756	24,882	Future
Equipment and Vehicles	37,483	13,904	9,072	9,945	9,945	20,888	101,237	Future
Plant Rehabilitation	10,065	2,222	1,778	1,950	1,950	4,096	22,061	Future
System Upgrades	24,002	12,318	6,938	7,605	7,605	15,972	74,440	Future
System Improvements	3,114	2,000	2,000	2,000	2,000	4,000	15,114	Future
Engineering Studies	1,202	500	177	0	0	0	1,879	2004
Water Treatment Plants and Wellfields - SCADA System	0	350	400	0	0	0	750	2004
Orr & Hialeah - Convert to Aqueous NH3 (RMP)	1,220	572	208	0	0	.	2,000	2004
Treatment Plants - Miscellaneous Upgrades	364	735	1,496	600	300	0	3,495	2006
Safe Drinking Water Act (1996) D - DBP	28,523	18,885	13,554	5,826	4,000	41,400	112,188	Future
Treatment Modifications - IESWT RULE - GWUDI	1,306	1,200	1,000	1,013	0	0	4,520	2005
Northwest Wellfield - Wells (IESWT RULE - GWUDI)	635	85	0	0	0	0	720	2003
Newton and ELC (IESWT RULE - GWUDI)	305	45	0	0	0	0	350	2003
Newton and ELC (IESWT RULE - GWUDI)	1,093	102	0	0	0	0	1,195	2003
South Miami Heights Plant and Wellfield	1,725	10,275	25,800	27,510	12,770	7,075	85,155	Future
Telemetering System	131	250	500	500	500	1,000	2,881	Future
Total	176,410	111,383	129,394	104,317	79520	282,150	883,174	

Source: Miami-Dade Water and Sewer Department, 2003.

Currently programmed capital sanitary sewer projects total almost $1.3 billion, as shown in Table 2.5.1-6, below. This includes more than $241 million for Peak Flow Management Facilities, over $136 million on sanitary sewer system equipment and vehicles, $111 million for regional pump station improvements, and almost $102 million in other sanitary sewer system improvements. Sanitary sewer projects that cost $906,655,040.24 were completed during the fiscal years October 1, 1995 through September 30, 2002.

Table 2.5.1-6
WASD Regional Sewer System
Capital Improvement Plan, 2002-2008
(in thousands of dollars)

Project Description	Past Years	Fiscal Year Ending 2003	2004	2005	2006	Future Years	Total Project Cost	Completion Date
North District Upgrades	24,526	5,362	3,467	422	0	0	33,777	2005
Central District Upgrades	16,906	11,056	10,324	3,842	473	22,950	65,551	Future
South District Expansion Phase 3	100	300	2,000	2,600	2,400	25,000	32,400	Future
South District Upgrades	5,678	4,625	1,198	0	0	17,500	29,001	Future
Mains and Pump Stations, North	5,751	7,400	10,900	4,149	1,000	1,000	30,200	Future
Mains and Pump Stations, Central	10,058	12,734	15,553	12,000	4,900	4,648	59,893	Future
Mains and Pump Stations, South	0	300	3,000	500	0	0	3,800	2005
Gravity Sewer Rehabilitation	38,799	10,641	5,912	7,000	10,000	10,000	82,351	Future
Special Construction - Sanitary Sewer Improvements	4,915	1,500	1,000	1,000	400	799	9,614	Future
General Maintenance and Office Facilities	6,388	6,828	13,200	6,085	300	9,700	42,501	Future
Corrosion Control Facilities	10,224	2,300	5,493	4,250	6,093	15,500	43,860	Future
Regional Pump Station Improvements Program	39,616	19,017	11,720	14,695	11,250	15,000	111298	Future
Peak Flow Management Facilities	13,863	12,133	16,390	17,880	35,298	145,500	241,064	Future
Sanitary Sewer System Extension	10,433	8,932	8,066	8,000	8,000	16,000	59,431	Future
Engineering Studies	1,914	1,035	800	800	800	150	5,499	Future
Miscellaneous Upgrades at Pump Stations	2,061	1,322	117	0	1,000	10,750	15,250	Future
Telemetering System	3,051	0	0	0	0	0	3,051	2003
System Upgrades	18,407	9,127	8,235	8,235	8,235	16,470	68,709	Future Years
~~Life~~ Lift Station Structural Maintenance & Upgrades	5,140	2,563	2,745	2,745	2,745	5,490	21,428	Future Years
System Improvements	19,722	4,675	6,525	26,825	13,325	30,792	101,864	Future Years
System Equipment and Vehicles	41,995	14,930	15,860	15,860	15,860	31,720	136,225	Future Years
Treatment Plants Rehabilitation	16,820	3,252	3,660	3,660	3,660	7,320	38,372	Future Years
Automation of Treatment Plants	4,829	4,395	3,800	1,300	1,915	5,564	21,803	Future
Miscellaneous Upgrades at Treatment Plants	135	1,220	845	1,000	2,400	12,644	18,244	Future
Treatment Plants - Effluent Reuse	5,003	841	200	0	0	0	6,044	2004
Total	306,333	146,489	151,010	142,847	130,054	404,497	1,281,230	

Source: Miami-Dade Water and Sewer Department, 2003.

Some of WASD's collection/transmission facilities have limited available capacity; consequently, approval of development orders which will generate additional wastewater flows are being evaluated by DERM on a case-by-case basis. Approvals are only granted if the application for any proposed development order is certified by DERM so as to be in compliance with the provisions and requirements of the Settlement Agreement between Miami-Dade County and FDEP and with the provisions of the Environmental Protection Agency Consent Decree. Furthermore, in light of the fact that the County's sanitary sewer system has limited sewer collection/transmission and treatment capacity, no new sewer service connections can be permitted until adequate capacity becomes available. Consequently, final development orders for new construction may not be granted unless adequate capacity in the sanitary sewer collection/transmission and treatment systems is available at the point in time when the project will be contributing sewage to the system or if approval for alternative means of sewage disposal can be obtained. Use of an alternative means of sewage disposal shall be an interim measure,

with connection to the public sanitary sewer system required upon availability of adequate collection/transmission and treatment capacity.

Miami-Dade County has completed treatment plant expansion projects, which will ultimately increase total treatment plant capacity to 375.5 mgd. A total of 824 wastewater transmission system projects, consisting of 615 pumping stations and 209 force mains, have been identified for compliance with the Consent Decree between the County and EPA. As of June 30, 2003, 731 projects had been completed, consisting of 536 pumping stations and 195 force mains. Another way that water and sewer installations and/or improvements are financed is through the creation and implementation of special taxing districts (STDs). These districts, covering properties within specifically delineated areas, impose property taxes on owners within these areas to pay for water and sewer infrastructure. Table 2.5.1-7 below, indicates the water and sewer special taxing districts established since 1995. Quail Roost was established for sanitary sewer infrastructure, and the other STDs were established for water infrastructure.

Table 2.5.1-7

Water and Sewer Special Taxing Districts
Completed 1995 – 2002

Name	Type	Date Approved[(1)]	Date Installed
Quail Roost	Sewer	07/11/95	04/09/96
S.W. 28 Street	Water	04/02/96	05/98
S.W. 68 Court	Water	01/09/96	11/14/96
S.W. 45 Street	Water	09/09/99	01/09/02
S.W. 46 Street	Water	02/25/97	03/04/99
S.W. 46 Street - Sec. 1	Water	12/07/99	01/09/02

Source: WASD, 2003.

(1) The approval date is the date the Ordinance was approved with the exception of S.W. 68 Court which is the date of approval by Public Works.

Finally, developers can provide water and sanitary sewer installation as projects are being constructed. In this case, the developer pays the cost of the materials and labor, connection costs, and WASD policy provides for the developer to receive oversizing credits that are provided as an efficiency measure. The credits are then recaptured as additional development connects to the installed water and sewer mains.

Progress is seen in achieving the objective. The County and WASD have been diligent in correcting deficiencies that resulted in the enforcement actions brought by FDEP and EPA. WASD also continues to pursue new and innovative projects to increase the efficiency of the regional system. Examples of this include new water treatment plants, wellfields, and pipelines in South Dade, including the South Dixie Highway corridor. Aquifer Storage and Recovery project testing at the West and Southwest Wellfield continues, as further discussed under Objective 6. WASD is partnering with the U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD) in pursuing wastewater reuse at the South District Wastewater Treatment Plant. Water and wastewater pipelines undergo more frequent testing and modernization is initiated as warranted.

The objective should nevertheless be retained to guide the County in providing and expanding water and sewer service. In concert with some of the policies under Objective 1, policies under

this objective may need strengthening to guide the County in providing service to the greatest extent within the UDB, and further limiting service outside of the boundary. Further, cost efficiency and increased productivity in some programs that favor oversizing of pipelines may need further consideration in light of potential inducement toward development on the fringes of the urbanized area.

Policy Relevance. The policies under Objective 3 were reviewed for continued relevance. Listed below are those policies requiring slight modifications or other changes.

Policy 3A.6. Subsections (d) and (e) of the policy, which details additional criteria to be considered in providing improvements to the potable water supply system, should be switched, and providing more importance to providing water supply capacity to existing development and redevelopment.

Policy 3E. The policy calls for the County to fully implement wastewater system improvements mandated in consent agreements with the Florida Department of Environmental Protection and the U.S. Environmental Protection Agency. The improvements are continuing to be made, and the policy should call for the County to continue to implement the improvements until completion and the terms of the consent agreements have been fully met to the satisfaction of the above named agencies and Court under whose jurisdiction the agreements fall.

Objective 4

Dade County shall protect the health of its residents and preserve its environmental integrity by reducing the proportion of residences and commercial establishments within the county using private wastewater treatment facilities. Dade County shall discourage the new or continued use of such facilities through the strict application of the CDMP and land development regulations.

CDMP Monitoring Measure. Recommended measurements include: number of residential septic tanks in use; number of non-residential septic tanks and other private treatment facilities, unsewered and developed areas with wellfield protection areas; number of IW (industrial wastewater) permits.

Objective Achievement Analysis. Approximately one-third of the County's single-family dwellings utilize septic tanks for wastewater disposal, according to DERM reports. While an exact number of septic tanks in use is difficult to determine, estimates of the number are available, based upon past reporting. The 1990 Census reported that 116,288 septic tanks were to serve some of the County's 311,519 single-family detached dwellings, representing a 37.3 percent rate. According to the Miami-Dade County Health Department, an average of 435 residential septic tank permits are generated each year, based upon 2002 data, and that 70 percent of the permits are for abandonment. Assuming that trend extended over the 13-year period since April 1990, 5,655 permits would have been issued, with a difference representing a decline of 2,263 septic tanks in use. In 2003, then, 114,025 septic tanks would still have been in use, out of the more than 363,849 single-family detached housing units reported in the 2000 Census [Note: the 2000 Census questionnaire did not ask how sanitary sewage was disposed of].

Figure 2.5.1-5 indicates areas of different concentrations of septic tank use, based on 1990 U.S. Census data. The map indicates the concentration of septic tanks in each 1990 census tract. The areas with the greatest concentration are in Pinecrest and an adjacent section of unincorporated Miami-Dade County, a portion of Coral Gables, the Redland in southwest unincorporated Miami-Dade County, and Westview in unincorporated northern Miami-Dade County, south of Opa-Locka.

Figure 2.5.1-6 is an illustration of the location of Wellfield Protection Areas (WPAs) within the County. Several of the areas contain land that is both developed and without sanitary sewer service. Arguably the most important wellfield, the Northwest Wellfield is located outside of the UDB, and almost all of the associated protection area is also located outside of the UDB. Furthermore, several activities associated with the Comprehensive Everglades Restoration Plan, including a possible Central Lake Belt In-Ground Reservoir (depending upon success with a pilot project), are anticipated as being located within the Northwest Wellfield Protection Area. These activities are envisioned as providing further protection from land uses being sited in the area that would not have sanitary sewer service.

Four other wellfields have large, sometimes overlapping, Wellfield Protection Areas. These are the West, Southwest, Snapper Creek, and Alexander Orr, Jr. Wellfields. These wellfields in effect create a large, contiguous Wellfield Protection Area that extends from SW 67 Avenue and Sunset Drive, east of the Palmetto Expressway, north to Coral Way and west to the Homestead Extension of Florida's Turnpike (HEFT), further north to the Tamiami Canal north of SW 8 Street and west to L-31 North Canal, south to approximately SW 112 Street, east to Tamiami Airport/SW 137 Avenue, then extending east along SW 120 Street to US 1, northeastward toward the Palmetto Expressway, and then SW 67 Avenue and Sunset Drive. In that large area, which has largely been developed only in recent decades, most developed sections are connected to the sanitary sewer system, especially west of HEFT. One exception to this is Horse Country, extending between HEFT and SW 127 Avenue between SW 40 and 72 Streets, and another exception is just northwest of that area, extending from SW 40 Street to SW 24 Street, and between SW 127 and 132 Avenues.

Larger sections in the area east of HEFT are developed and unsewered. These sections include an area between North Kendall Drive and SW 104 Street, from SW 117 Avenue to SW 107 Avenue; a large section generally extending southeastward from State Road 874 to the southeastern boundary of the WPA; another section extending northward from the Snapper Creek Expressway to SW 40 Street, and eastward from SR 874 and SW 87 Avenue, to the eastern boundary of the WPA. Other smaller, scattered sections are located between SW 87 Avenue and HEFT, from SW 24 Street to SW 72 Street.

Of smaller WPAs, to the south, most developed areas have sanitary sewer service. An exception is the WPA located southeast of US 1 and SW 264 Street, where only part of the section has sanitary sewer service. In the Oeffler (North Miami Beach) WPA, in the north and a developed area, the eastern two-thirds do not have sanitary sewer service.

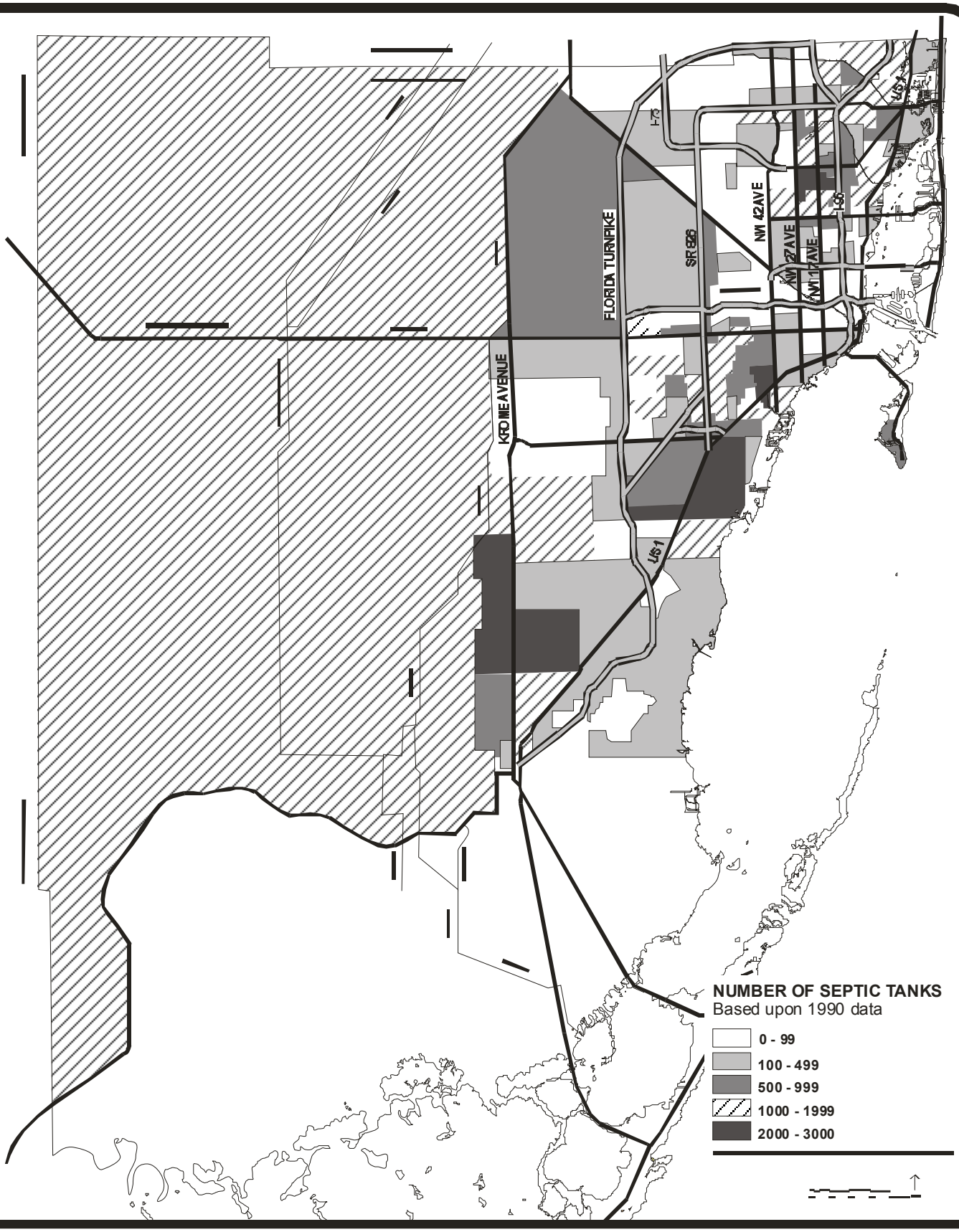


Figure 2.5.1-5

SEPTIC TANK AREAS

DEPARTMENT OF PLANNING AND ZONING 2003

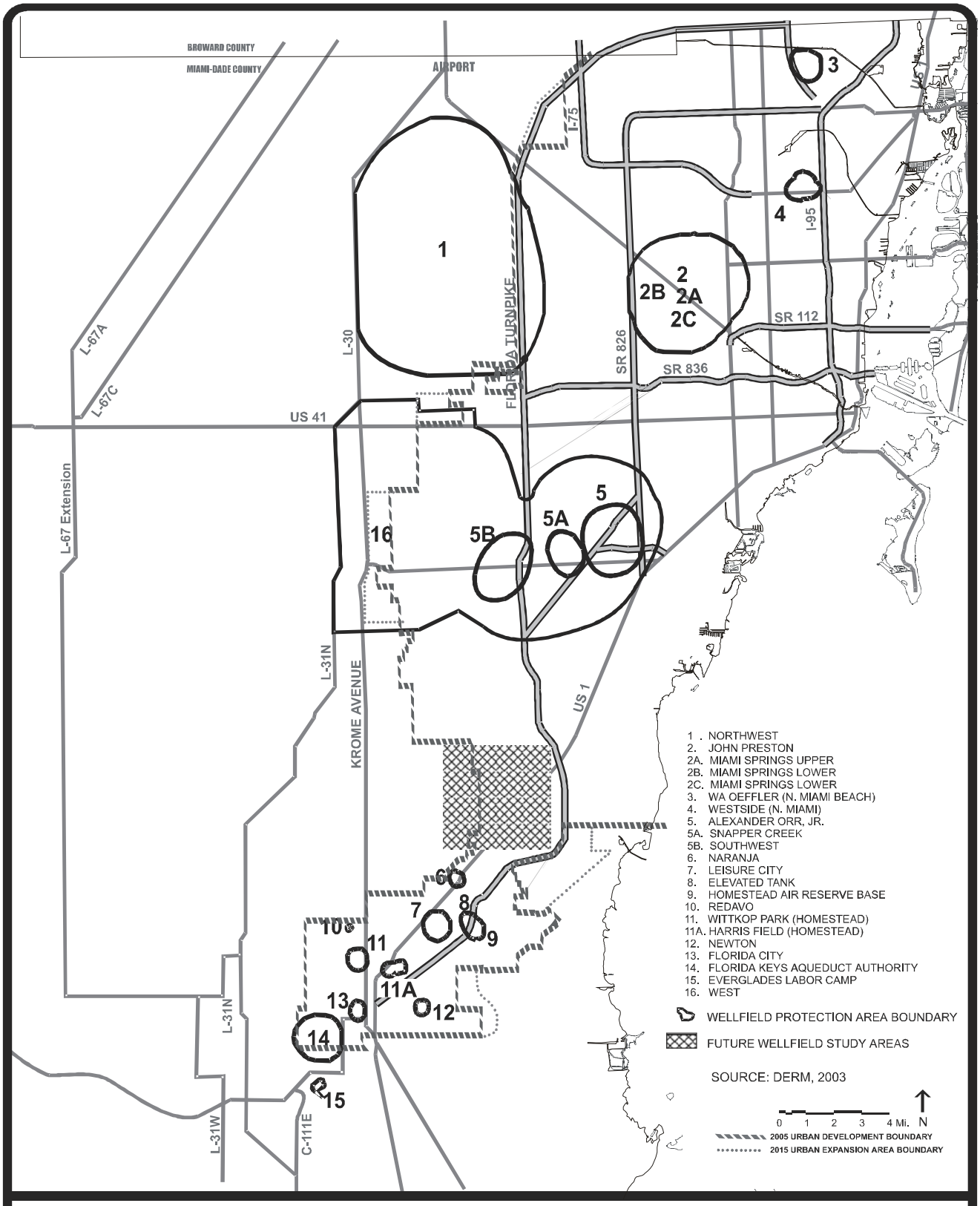


Figure 2.5.1-6

WELLFIELD PROTECTION AREAS

DEPARTMENT OF PLANNING AND ZONING

2003EARole

The decline in the number of IW (industrial wastewater) permits in Miami-Dade County that was reported in the 1995 EAR has continued. According to DERM, just eight facilities have IW4 permits that allow them to discharge wastewater to the ground. DERM has continued its policy of discouraging industrial facilities from discharging to groundwater or open waters. Though Miami-Dade County does not have an outright prohibition against industrial wastewater discharges to the ground, there are codified restrictions, including no discharge allowed of non-domestic wastewater to septic tanks, and that stormwater only be discharged to systems designed to convey stormwater.

Upon analysis of the monitoring measures, progress has continued in achievement of the objective. The number of residential septic tanks in the County continues to decline, although at a slow rate. Properly maintained, septic tanks pose minimal threat to the water supply or otherwise to the environment. DERM's policy of discouraging discharge of wastewater to ground or open water by industrial facilities has greatly reduced the number of existing IW4 permits over time. Most of the land uses within Wellfield Protection Areas are served by sanitary sewer, and of those that lacking such service, land is generally designated Residential Estate, preventing excessive density from causing harm to the aquifer.

Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained.

Objective 4 Monitoring Measure should be changed to be the proportion of septic tank permits issued that are for new septic tanks as opposed to septic tank abandonments.

Objective 5

Develop and implement a comprehensive water conservation program to ensure that a sufficient, economical supply of fresh water is available to meet current and future demand for potable water without degrading the environment.

CDMP Monitoring Measure. Recommended measurements include: average water use per capita; percent water unaccounted for; peak day to average day water demand ratio. This data is published annually by WASD so no alternative measure is recommended.

Objective Achievement Analysis. WASD has instituted several water conservation programs that have helped to reduce water usage in the County. Conservation programs/measures that WASD maintains include:

- Education programs
- School contests
- Advertising on the County's cable television station, and on buses and bus shelters in conjunction with the South Florida Water Management District
- Providing customers with information and free water conservation kits
- Aggressive prosecution of water theft
- Leak detection program

- County ordinance restricting lawn watering to the most efficient times of the day
- Partial sponsor of the Mobile Irrigation Lab program, in which the agricultural industry's irrigation equipment is evaluated and recommendations are made for reducing water usage
- Xeriscape principles
- Ultra-low volume plumbing in new construction
- Water conservation based rate structure (increasing block rate)
- Rain-sensor override for new lawn sprinkler systems

Additionally, WASD is working to conserve water through effluent reuse. The 1973 Water Quality Management Plan for Miami-Dade County recommended the "cessation of all waste discharges into inland canal system of Dade County" and to regionalize the "collection and treatment system to serve all waste sources in Dade County". The recommended alternative included two coastal regional WWTP with ocean outfalls and another facility in the southern part of the county with the effluent disposal method to be evaluated in the future. The investigations conducted for the South District WWTP, as well as the Environmental Impact Statement, recommended the use of deep injection wells for effluent disposal and the location of the plant near the Bay. The size and location of the three regional plants makes the use of reclaimed water not very cost effective. Additionally, the potential demands for reclaimed water applications are in the west and scattered throughout the County, this requires an extensive transmission system to deliver the reclaimed water, from the coast back to the mainland.

Currently, the Miami-Dade County Water and Sewer Department (MDWASD) is reusing over 16 million gallons per day (MGD) of wastewater. The reclaimed water is used for process water at the three regional wastewater treatment plants (WWTPs), for irrigation at two of the WWTPs, and for irrigation of the Florida International University North Campus (95,000 gallons per day). In 1998, the MDWASD conducted a Reuse Feasibility Study in accordance with the Florida Department of Environmental Protection (FDEP) guidelines. The report concluded that the level of reuse that is currently implemented was the reuse that was economically, technologically and environmentally feasible.

The County, through a Consent Order (CO) executed in July 2003 with the FDEP, has committed to providing 18.75 MGD capacity for reclaimed waster as effluent disposal as part of the next expansion of the South District WWTP, which is planned for 2013. In addition the County has committed to be the local sponsor of the Comprehensive Everglades Restoration Plan (CERP) South Miami-Dade Reuse Project. If the Reuse Pilot Project (estimated to be completed by 2011) is deemed feasible, the full scale project with an estimated cost to the County of $200 million will provide for 131.25 MGD of reuse at the South Dade WWTP.

The CO also includes conditions for developing a 20-year water management plan for the County. The MDWASD is currently working with the South Florida Water Management District in developing this plan. The plan includes determining the water supply shortfalls to meet demands to the year 2025 and evaluating alternative water supply to meet the future demands. The alternative water supplies to be evaluated are various forms of reuse and aquifer storage and recovery (ASR) throughout the County. In addition, MDWASD is planning to update the 1998 Reuse Feasibility Study.

In addition to the reuse already mentioned, the Wastewater Facilities Master Plan, which was approved by the Miami-Dade County Board of County Commissioners in July 2003, includes a second expansion of the wastewater system by the year 2020. The proposed facility is a new wastewater treatment plant in west Miami-Dade and it is consistent with the proposed CERP West Miami-Dade Reuse project.

Based upon the above, it appears that MDWASD is currently implementing measures to reuse and reclaim water and wastewater. However, the monitoring measures, as evaluated below do not specifically address these conservation measures. Therefore, it is proposed that the monitoring measure for Objective 5 be expanded to include the total amount of reused and reclaimed water and wastewater.

The monitoring measures as adopted for this objective attempt to provide answers to whether the conservation measures are succeeding. Although not necessarily seen in the average and peak demands placed upon the water treatment plants, increases in demand placed upon the water treatment plants have not occurred while population has increased. These results are shown in Table 2.5.1-8, which shows that gallons per capita per day has declined from 179 in 1995 to 159 in 2002, at the same time that the peak-to-average ratio has generally remained steady in a narrow range, with an eight-year average ratio of 1.11.

Table 2.5.1-8
Demand and Service Data, WASD Water System
1995-2002

Year	Population Served (thousands)	Peak Demand (MGD)	Average Demand (MGD)	Gallons Per Cap. Per Day	Peak to Ave. Ratio
1995[1]	1,906	382.3	341.1	179	1.12
1996	1,928	363.9	343.1	178	1.06
1997	1,967	370.9	340.3	173	1.09
1998	1,999	383.1	343.8	172	1.11
1999	2,032	391.3	341.3	168	1.15
2000[1]	2,062	378.2	346.1	168	1.09
2001	2,092	345.6	321.0	153	1.08
2002	2,122	391.3	336.7	159	1.16
Average	2,013	375.8	339.2	168	1.11

MGD= Million Gallons per Day

Source: Miami-Dade Water and Sewer Department, 2002

[1] Population data from 2000 to 2002 based on interpolating data included in the WASD Water facilities Master Plan between 1999 and 2005

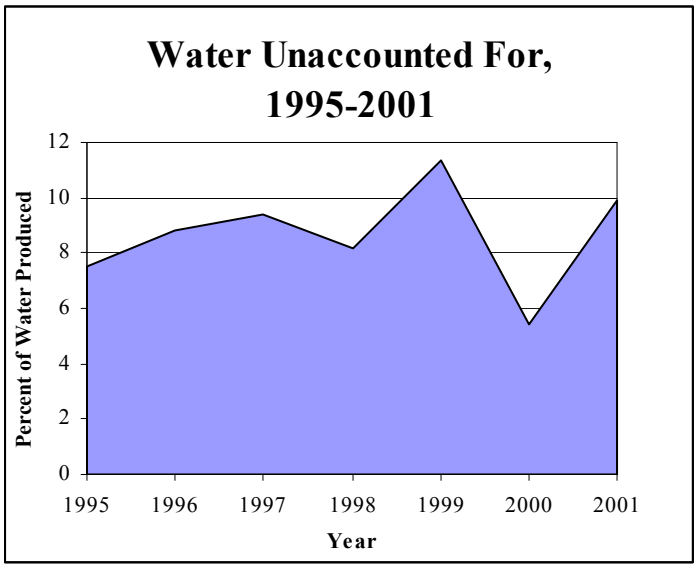
A third measure of conservation programs, the percent unaccounted for of water treated and produced by the water treatment plants, has exhibited significant variations, with an overall decreasing trend. Since 1995, when the percent unaccounted for was 7.53 percent, the percentage has increased in 1999, and decreased in 2000, when a drought began that extended into 2001, and during which more stringent water conservation measures were put in place. The percentage increased again in 2001, to 9.89 percent, following the drought's end and then decreased in 2002 to 6.05 percent.

Progress has been made in achieving the objective, especially in water conservation at the end user stage, seen in the decline in per capita water use. Table 2.5.1-9, below, nevertheless does show that the amount of water treated and produced by the regional water treatment system and sold has generally been within a narrow range. MDWASD needs to continue implementation of the Water Conservation Program and aggressive prosecution of water theft.

Table 2.5.1-9
Water Production: WASD System 1995-2001

Fiscal Year (Oct.-Sep.)	Total Water Produced and Purchase (Million Gallons)	Total Water Sold [1] (Million Gallons)	Percent of Water Unaccounted for
1995	123,307,394	114,016,756	7.53
1996	125,165,861	114,088,489	8.85
1997	123,775,360	112,102,271	9.43
1998	125,119,832	114,856,494	8.20
1999	124,345,947	110,243,675	11.34
2000	126,525,832	119,706,764	5.39
2001	116,863,365	105,306,898	9.89
2002	122,751,397	97,748,330	6.05

Source: Miami-Dade Water and Sewer Department, 2002
[1] Includes adjustments for flushing of water mains, leak detection program, cleaning of sewer gravity mains, under registration of meters, Fire Department usage, etc.



Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. However, the monitoring measure should be modified as follows.

Objective 5 Monitoring Measure. A measure should be developed to evaluate the amount of reused and reclaimed water and wastewater in the County.

Objective 6

Dade County shall undertake timely efforts to expand traditional sources of raw water and develop new raw water sources to meet the County's level of service standards for water supply.

CDMP Monitoring Measure. Recommended measures include: reserve capacity of raw water and capacity of the aquifer storage and recovery system.

Objective Achievement Analysis. Aquifer Storage and Recovery (ASR) is the underground storage of water in an acceptable aquifer through a well when water is available, and subsequent recovery of the water from the well during periods of high demand; the ASR well acts as an underground reservoir for injected water and reduces evaporative water losses. Of three types of ASR facilities – treated water, raw water, and reclaimed water – WASD began developing a raw water ASR system in 1994. ASR facilities in Miami-Dade County inject water into the brackish water-containing upper Floridan Aquifer that is separated from the shallow Biscayne Aquifer by more than 600 feet of sand, silt, clay, and some limestone that serve as a confining unit. Regulations governing water resources require injected water to meet drinking water standards when the receiving aquifer is classified as an Underground Source of Drinking Water, unless an exemption is granted by EPA. MDWASD applied for a limited aquifer from the FDEP; however, the application was not approved. As a result, the MDWASD will be treating the injected water into the ASR well with ultra violet disinfection to meet the required drinking water standards.

WASD has a total of five ASR wells. The West Wellfield, a 15-mgd system, utilizes three ASR wells and the Southwest Wellfield, a 10-mgd system utilizes two ASR wells. The ASR system at both wellfields consists of fresh groundwater from the Biscayne Aquifer being pumped into the adjacent ASR wells that extend into the upper Floridan Aquifer, and stored. Recharged water is then recovered during dry periods by pumping the ASR wells and conveying the water to the Alexander Orr, Jr. Water Treatment Plant. The West Wellfield is located at SW 72 Street and 172 Avenue, and the Southwest Wellfield is located at SW 88 Street and 127 Avenue. Currently, 2 additional ASR wells are being designed for the Northwest Wellfield.

During the 2001 drought, more than 1 billion gallons of water were recovered from the three ASR wells at the West Wellfield. During that drought, up to 12 million gallons of water were recovered through those three wells from ASR storage each day. That daily volume represents roughly 10 percent of the water volume normally required for public supply in that service area.

Analysis of the measures for this objective indicates progress in securing reserve supplies of raw water necessary for periodic extended dry weather or heavy water use. Tests that so far indicate that an ASR system will work at the West and Southwest Wellfields have been ongoing and foresee that a full-scale ASR program will be implemented in the future. MDWASD's ASR system has proven to be effective during a drought condition. The objective should be retained and left with no change.

Policy Relevance. The policies under Objective 6 were reviewed for continued relevance. Listed below are those policies requiring slight modifications or other changes.

Policy 6C. The policy calls for the County to investigate and implement Aquifer Storage and Recovery techniques. ASR techniques have been installed and are undergoing testing in anticipation that permits will be issued. The policy should be updated to reflect this development.

Policy 6E. This policy calls upon WASD to investigate the feasibility of reclaimed water use. WASD is already using reclaimed water for maintenance activities at the three regional wastewater treatment plants, and is participating in Pilot Projects of the Comprehensive Everglades Restoration Plan (CERP) that explore the use of reclaimed water to create wetlands to act as buffers and to augment water flows to Biscayne Bay. The policy should be modified to reflect that the County is continuing to investigate the utilization of reclaimed water use.

2.5.2 Solid Waste Subelement

The Solid Waste Subelement was established upon recommendations contained in the 1995 Evaluation and Appraisal Report for the Water, Sewer and Solid Waste Element of the Dade County Comprehensive Plan. As a result, most of the monitoring measures described below are newly established and baseline data was not always available. The best original data available is therefore compared to current data in the evaluation that follows.

Available data from the Department of Solid Waste Management (DSWM) regarding volumes processed at the various facilities and facilities types were used to assess performance. For instance, in order to measure achievement of an objective concerning increased volumes and/or percentages of waste being handled by resources recovery and recycling methods, waste volumes received at the Resources Recovery Plant and by private recycling operators were compared with volumes received at the landfills.

Results of these calculations and measures regarding performance against objectives or the standards were analyzed and changing circumstances and technologies or other problems were considered. Any deviation from the stated objectives was addressed.

Objective 1

In order to serve those areas where growth is encouraged and to discourage urban sprawl, the County shall plan and provide for solid waste disposal services on a countywide basis as provided for in this element in conformance with the future land use element of the comprehensive plan.

CDMP Monitoring Measure. Number of accounts outside of the Urban Development Boundary (UDB) served by Miami-Dade solid waste collection services each year; amount of waste disposed of by residential and commercial accounts outside of the UDB processed by the Miami-Dade County solid waste disposal system.

Objective Achievement Analysis. In 2003, the Department of Solid Waste Management (DSWM) reports that 3,454 accounts, serving 3,531 residential units and 8 commercial accounts, are located outside the UDB and receive solid waste collection service (Table 2.5.2-1). The 1995 EAR Solid Waste Monitoring and Evaluation Program reported that two small DSWM collection areas were located in southwestern Miami-Dade County outside of the UDB. The population in these areas was deemed to be of sufficient size to warrant the provision of such service in order to preserve health and welfare. These two collection areas were estimated to include approximately 2,100 housing units, which represents 0.86 percent of the 245,600 residential units located both inside and outside the UDB that were provided with DSWM collection in the fiscal year ending September 1994. In comparison, the 3,531 residential units located outside of the UDB and served by DSWM collection service in 2003 represent 1.21 percent of all housing units in the County served by DSWM.

No data exist indicating the amount of waste disposed of by accounts located outside of the UDB and processed by the County solid waste disposal system. DSWM collection routes in the vicinity typically include areas located both inside and outside the UDB and any estimation of waste collected on these routes solely from outside of the UDB would be less than precise.

Table 2.5.2-1
Miami-Dade County Solid Waste Management Active Accounts in 2003

	Residential		Commercial		
Urban Development Boundary	Accounts	Units	Accounts	Units	Account Subtotal
Inside	278,894	288,959	633	687	279,527
Outside	3,446	3,531	8	8	3,454
	282,340	292,490	641	695	
	Total Active Accounts:			282,981	
	Total Units:			293,185	

Source: Miami-Dade County Dept. of Solid Waste Management, January 2003

Analysis indicates that this objective has been achieved, notwithstanding the modest increase in the number of housing units outside of the UDB that are served by County refuse collection. The 1,400 housing units added since 1994 outside of the UDB represents 2.99 percent of the increase of 46,890 housing units served both inside and outside of the UDB by DSWM. The collection service is provided as a health and welfare measure – by providing the collection service, refuse is not left accumulating on properties nor being dumped on vacant land or in canals. Furthermore, capital expense are not being incurred by DSWM outside of the UDB.

The utility of the objective is still seen as appropriate, but the inability to differentiate the amount of waste generated by accounts located outside of the UDB from the amount of waste generated by accounts inside the UDB supports revising or deleting the relevant monitoring measure.

Policy Relevance. The policies under Objective 1 were reviewed for continued relevance. Listed below are those policies requiring modification.

Policy 1A. This policy, which refers to locations in the County receiving priority in the provision of solid waste management facilities and services, should be modified. The directive for avoiding provision of solid waste service to areas outside of the Urban Development Boundary may be modified or eliminated, in that such service is not a capital expenditure and Furthermore, provision of solid waste collection service is not generally recognized as one of the services that induces further development along the urban fringe, such as roads, water or sewer lines, or other infrastructure.

The Objective 1 Monitoring Measure should include identification of solid waste disposal sites or fixed capital assets such as Landfills or Trash & Recycling Centers located outside the Urban Development Boundary (UDB); number and/or percentage of special collection events such as Household Hazardous Waste collections conducted outside of the UDB.

Objective 2

The County will implement procedures to ensure that existing solid waste facility deficiencies are corrected and that adequate solid waste facility capacity will be available to meet future needs.

CDMP Monitoring Measure. The achievement of the LOS standards are their own monitoring measures. For the entire objective, the following measures are recommended: annual amount of waste processed at each County disposal facility; annual amount of waste disposed of at each County transfer facility; amount of waste processed at private disposal facilities or exported out of the County.

Objective Achievement Analysis. Approximately 2.9 million tons of waste were disposed during the period October 2001 through September 2002 (FY 2002), including an estimated 538,924 tons disposed of at non-County facilities. According to the 1995 EAR, 3.6 million tons were generated in 1993. DSWM reported disposing of approximately 1.4 million revenue tons in Miami-Dade County public facilities during FY 2001-2002. Lesser amounts were disposed of at County-contracted private facilities located both inside and outside of the County. Current per capita waste generation is estimated to be 9.4 pounds per day in a Florida Department of Environmental Protection report (2002-2003 Municipal Solid Waste Management Report, November 2002).

Miami-Dade County owns and operates three landfills, which are presented in Figure 2.5.2-1. The South Dade Landfill is a Class I garbage landfill that is permitted to accept garbage, trash, and special wastes such as asbestos, sterile medical waste, sludge, shredded tires, pathological waste (dead animals), ash, and contaminated soil. The North Dade Landfill is a Class III landfill that is permitted to accept only waste that is not expected to produce leachate, which poses a threat to public health or the environment. Examples of this type of waste are trash, yard trash, shredded tires, and construction/demolition debris. The Resources Recovery Facility (RRF) is owned by the County and operated under a management agreement by Montenay-Dade, Ltd., an affiliate of Montenay Power Corp. The RRF converts garbage into refuse-derived fuel. Garbage and trash are processed into refuse-derived fuel and then burned in four boilers that produce steam to turn two turbine generators. Energy produced from burning the fuel is enough to power the plant and supply the average power needs of 40,000 households per year. The Ash Landfill, located at the RRF, is the final disposal site for ash produced by the RRF and also some ash from a co-generation facility in Palm Beach County. Also located at the RRF is a Recyclable Trash Improvements facility, which produces fuel pellets for cogeneration uses. (Annual Financial Report for the Fiscal Year ended September 30, 2001, Miami-Dade County Department of Solid Waste Management).

Almost 364 thousand tons of waste were disposed of at the South Dade Landfill and 331 thousand tons were disposed of at the North Dade Landfill in FY 2002. The Resource Recovery Incinerator processed 556 thousand tons, and almost 148 thousand tons were disposed of at the Resource Recovery Ashfill. Three thousand tons of excess ash from the Okeelanta (Palm Beach County) biomass cogeneration facility was disposed of at County facilities.

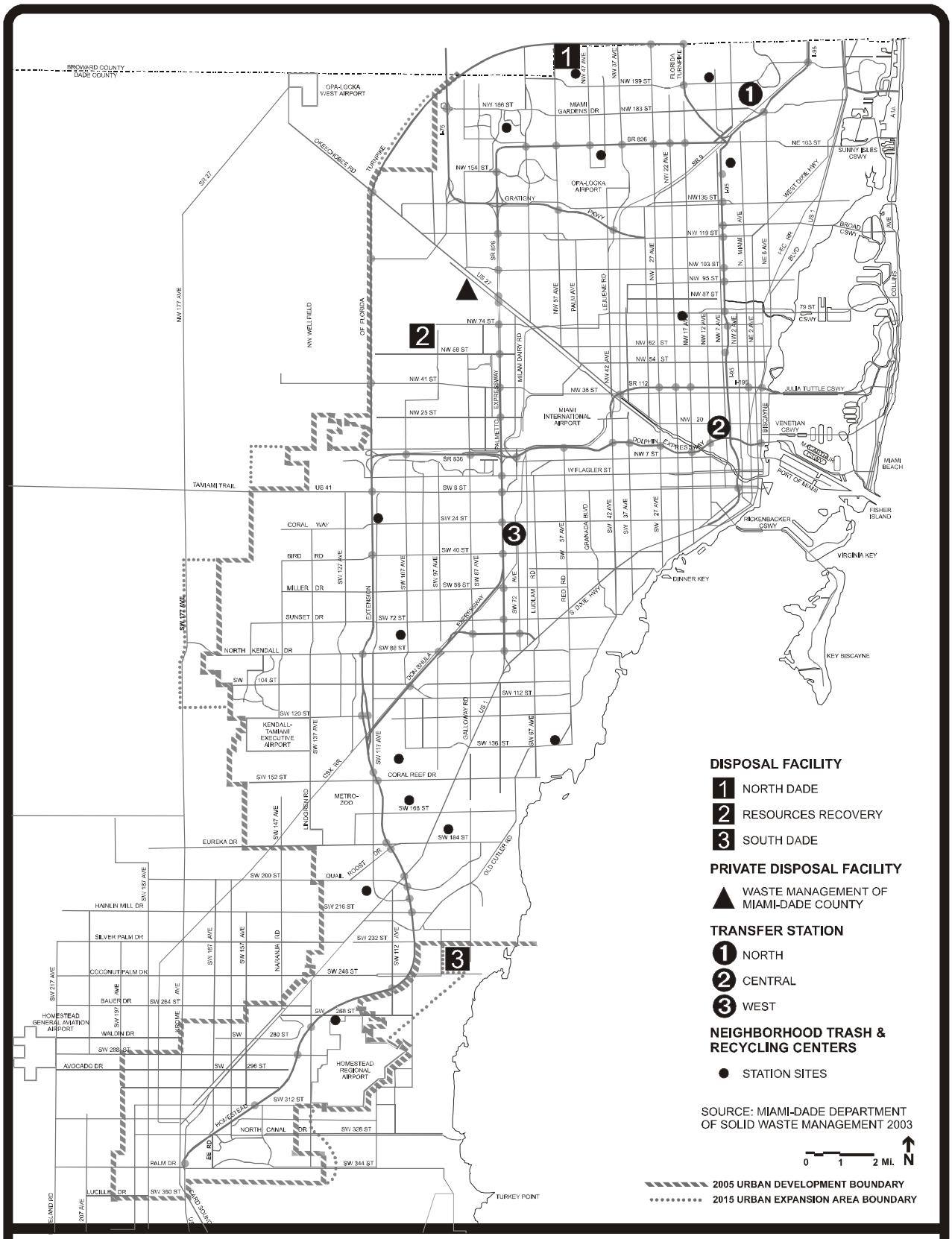


Figure 2.5.2-1

MIAMI-DADE COUNTY SOLID WASTE DISPOSAL SYSTEM

DEPARTMENT OF PLANNING AND ZONING

2003EARale

A total of 174,006 tons of waste were disposed of contractually, 122,502 in the Medley Class 1 Landfill, and 51,504 tons in the Wheelabrator South Broward facility. Under long-term waste disposal contracts with Waste Management Inc. of Florida, Miami-Dade County must deliver or direct to be delivered, a minimum of 100,000 tons per year to the Medley landfill. The County may dispose of a combined total of up to 500,000 tons per year at that site or the Central Sanitary Landfill in Pompano Beach. [Note: the Wheelabrator contract expired in December 2002.]

Miami-Dade County operates three regional Transfer Stations where collection vehicles unload waste for transfer onto substantially larger vehicles, which permits collection vehicles to minimize the amount of time that the vehicles are unavailable to collect solid waste (Annual Report). The Transfer Stations are strategically located throughout the County and were designed to serve several purposes within the overall solid waste management system. These purposes include reduction of travel distance and transport time for waste collection vehicles, reduction of waiting time and traffic congestion at the DSWM disposal facilities, allowance for operating flexibility by providing short-term storage capacity for solid waste prior to disposal, and enabling the DSWM to comply with various waste delivery obligations without directing municipal or private haulers to specific disposal facilities. Table 2.5.2-2 shows the solid waste amounts processed at the Transfer Stations, which are located in Figure 2.5.2-1. The DSWM also has ongoing transfer operations at the RRF and at the South Dade Landfill for the transport between facilities of waste and waste derived by-products such as yard trash, tires, ash, and process rejects.

Table 2.5.2-2
Annual Amount of Waste Disposed of
At Miami-Dade County Transfer Stations, Oct. 2001-Sept. 2002

Transfer Station	Inbound Total	Outbound Total
Central TS	232,771	225,290
Northeast TS	214,400	211,440
West TS	280,666	273,985
TS Total In	727,837	710,715
Diff. TS In/Out		17,122

Source: Miami-Dade County DSWM, 2002

This objective also refers to the provision of adequate capacity, which is evaluated in terms of the Level of Service (LOS). LOS is interpreted within the County in accordance with Policy 2A, which obligates the County Solid Waste Management System to collectively maintain disposal capacity sufficient to accommodate waste flows committed to the System through long-term interlocal agreements or contracts with municipalities and private waste haulers, and anticipated non-committed waste flows, for at least five years.

Table 2.5.2-3 below is based upon a facility capacity analysis prepared by DSWM in 1999, that projects capacity for the three disposal facilities owned and operated by Miami-Dade County through the year 2039. As the table indicates, the County has capacity through the five years (2003-2008) specified in Policy 2A, and capacity is adequate to meet LOS until 2011, three years beyond the minimum standard. According to the complete capacity analysis conducted by DSWM in 1999, Miami-Dade County in 2003 has some capacity for disposing of currently projected wastestreams until the year 2032. This determination is contingent upon the continued

ability of the County and its disposal service contract providers to obtain and renew disposal facility operating permits from the applicable federal, state, and local regulatory agencies.

Table 2.5.2-3
Solid Waste Facility Capacity Analysis, to Meet Level of Service Standard

Year	Ashfill*	S. Dade**	N. Dade***	S. Dade W/o Cell 5 (-4.4 m tons)	Difference (tons disposed prior year)
Base Capacity	3,150,000	9,148,000	3,943,000	4,748,000	
2000	3,003,000	8,825,000	3,671,000	4,425,000	-742,000
2001	2,865,000	8,595,000	3,407,000	4,195,000	-632,000
2002	2,727,000	8,365,000	3,146,000	3,965,000	-629,000
2003	2,589,000	8,135,000	2,779,000	3,735,000	-735,000
2004	2,451,000	7,905,000	2,415,000	3,505,000	-732,000
2005	2,313,000	7,675,000	2,051,000	3,275,000	-732,000
2006	2,175,000	7,445,000	1,687,000	3,045,000	-732,000
2007	2,037,000	7,215,000	1,323,000	2,815,000	-732,000
2008	1,899,000	6,985,000	959,000	2,585,000	-732,000
2009	1,761,000	6,755,000	595,000	2,355,000	-732,000
2010	1,623,000	6,525,000	231,000	2,125,000	-732,000
2011	1,485,000	6,295,000	0	1,895,000	-599,000
Total Remaining Years****	18	29	7	16	

Source: All capacity figures derived from Capacity of Miami-Dade County Landfills report, DSWM, Engineering Division, October 1999.

* Ashfill capacity includes cells 17-20; cells 19 and 20 not yet constructed.

** S. Dade incl. Cells 3-5, 5 still to be constructed. Upon ashfill capacity fills up, ash goes to S. Dade. Assumes all unders consume capacity whether or not it is used as cover.

*** N. Dade capacity represents buildout of facility. Upon N. Dade capacity depletion, trash is exported.

****As of 2003.

The projection of capacity is based on the demand generated by those parties (municipalities and private haulers) who have committed their waste flows to the solid waste management system through interlocal agreements and long-term contracts, as well as anticipated non-committed waste flows. A new analysis is due to be completed in 2003 that should reflect the recent actual tonnage disposed of in County facilities. For FY 2002, this amount was 846,000 tons, which is 200,000 tons more than the amount projected for 2002. If the increasing demand results in an upward trend, anticipated capacity decrease would occur at an accelerated rate and DSWM would then reassess the need for alternate or additional capacity.

Capacity analysis depends upon the degree of compaction and also the differential densities of municipal solid waste. A U.S. Environmental Protection Agency (EPA) publication (Decision Maker's Guide to Solid Waste Management, Volume II, 1995) notes that waste density figures (which in itself are functions of mass and volume of materials) along with waste composition and compaction figures can be used in estimating landfill capacity. The practical effect is that, over a period of years in which population, technology, societal trends, and waste composition changes, any estimate of time left until landfill capacity is reached will change, and such estimates are likely as well to differ from year to year. It must also be noted that system capacity

includes the amount of waste that can be disposed of contractually at privately owned facilities, in some cases located outside of Miami-Dade County.

Achievement of Objective 2 is demonstrated in the following analysis. County disposal facilities have adequately handled the solid waste that has been generated by the collection system and private and municipal customers of DSWM. Disposal facilities have exhibited sufficient capacity and the County has implemented procedures to ensure that future demand is met. It is recommended that the objective be retained but with text changes requiring the County to maintain sufficient capacity for achieving LOS, and specifically defining the LOS as maintaining system capacity for at least five years. A more accurate monitoring measures would be the sum total of the amounts of waste disposed of at various disposal facilities operating as a system in comparison with the sum total of projected disposal capacity demand on the entire system.

Policy Relevance. The policies under Objective 2 were reviewed for continued relevance. The objective and those policies requiring slight modifications or other changes are listed below.

Objective 2. The objective directs that the County implement procedures for correcting what are perceived as solid waste facility deficiencies. However, the policies under this objective define and implement Level of Service standards, which are defined as maintaining adequate disposal capacity. As a result, it is suggested that the objective be clarified to refer to the intention of the County to maintain adequate disposal capacity, and that any deficiencies refer to total systemwide disposal capacity rather than individual facility capacity.

Policy 2A. This policy, actually but not explicitly, defines the Level of Service standard, which is to maintain solid waste disposal capacity for 5 years, through a combination of County-owned facilities and those operated under contract with the County. It is proposed that maintaining this capacity be explicitly defined as the Level of Service standard.

The following monitoring measures are recommended for Objective 2: annual amount of waste disposed of at each County disposal facility; annual amount of waste processed or disposed of at each County transfer facility; amount of waste disposed of at private disposal facilities or exported out of the County; capacity analysis of County disposal facilities prepared by the County's solid waste management department; per capita waste generation.

Objective 3

The County will provide an adequate level of service for solid waste facilities to meet both existing and projected needs as identified in this plan through implementation of those projects listed in the Capital Improvements Element. All improvements for replacement, expansion or increase in capacity of facilities shall conform with the adopted policies of this Plan including level of service standards for the facilities.

CDMP Monitoring Measure. The measurements recommended are the ratio of value of projects scheduled in the CIE to the value of capital projects included in the Dade County Capital Budget; and the ratios of the value of capital projects included in the CIE and listed as serving

new growth and value of capital projects included in the CIE and listed as serving existing needs to the total value of projects listed in the CIE.

Objective Achievement Analysis. No comparable data from the 1995 EAR for the Water, Sewer and Solid Waste Element exists, since the Solid Waste Monitoring and Evaluation Program in effect prior to that time lacked a specific monitoring measure. However, such data is available from the EAR for the Capital Improvement Element. Table XI-27 from the 1995 EAR showed that new growth accounted for 31.57 percent of solid waste management capital expenditures for the fiscal years from 1989-90 through 1994-95. Existing deficiency accounted for 49.04 percent of capital expenditures, while combined expenditures accounted for 19.39 percent.

Solid Waste Management capital projects listed in April 2002 Cycle CDMP Amendment Application No. 8, which updated the Capital Improvements Element, total $75.83 million. This amount represents 0.65 percent of the $11.7 billion 2002-2003 Miami-Dade County Capital Budget. Of the $75.83 million, $3.5 million is designated for new growth and the remaining $72.33 million is designated for a combination of new growth and existing deficiency. Since the value of the DSWM capital program relative to the countywide capital program is not a meaningful measure, the measure is recommended for deletion.

The remaining measure that would require separation of Solid Waste Management capital projects into those serving new growth versus those serving existing needs is inappropriate, since almost all of the capital projects serve both existing need and future growth. There is no meaningful way to determine which portions of projects will serve new growth, and which portions will serve existing needs. In addition, many capital improvements are designed to increase operational efficiency or implement environmental improvements, and other improvements are replacements due to age/obsolescence.

Analysis indicates that progress has been made in achieving the objective through a review of the relevant measure in Objective 2, achievement of the LOS. Continued development within the UDB reduces available and suitable locations for future disposal facilities and future disposal capacity may lie in contractual arrangements with private contractors for extra Miami-Dade County locations. Other future capital costs are likely to be associated with Transfer Stations, recycling facilities, and landfill closure and environmental monitoring or remediation, rather than on the large scale that landfill construction represents. Several factors combine to make capital cost comparisons problematic between solid waste management and other public works projects. Public projects are diverse and encompass solid waste management, water and sewer, police and fire protection, drainage, libraries, and cultural facilities. In addition, major projects requiring high capital expenditures typically occur at intervals and are long-lasting. Finally, public capital budgeting occurs through a political process, which reflects various constituencies and diverse community values. As a result, the comparison of capital expenditures for any one class of project against an entire capital budget does not accurately or fully measure the extent to which a community's needs are being met.

Policy Relevance. The objective and policies under Objective 3 were reviewed for continued relevance. Listed below are those policies requiring modification.

Objective 3. Since the Level of Service standard should now be explicitly defined under Objective 2, it is proposed that the objective be deleted but that several of the policies, which further implement the Level of Service through capital projects be placed under a revised Objective 2.

Policy 3A.3. This policy calls for solid waste system improvements to be funded in accordance with a criterion to enable or encourage use by Miami-Dade County of products made from recycled materials. Since the Department of Solid Waste Management has little involvement in County procurement activities this criterion should be revised to focus on DSWM facility improvements that promote recycling or reuse of materials prior to disposal.

Objective 3 Monitoring Measure. If the policies under this objective are moved to Objective 2, then these monitoring measures should also be listed under that objective. Identification and value of solid waste management capital projects, including source of funding, listed in the Miami-Dade County Capital Budget and in the CIE.

Objective 4

Miami-Dade County shall provide for the management of solid waste in a manner which places a high priority on the maintenance of environmental quality and community quality of life.

CDMP Monitoring Measure. Use of the solid waste management system to promote environmental quality and community quality of life.

The measurements recommended are: quantity of each major class of waste product recycled within the County, quantity of compost and/or mulching products generated by the waste system; quantity of products purchased by the County containing recycled material; quantity of packaging material saved in the County through the use of reduced or alternative packaging technologies; energy created through the incineration of waste derived fuel. Alternative measurements include: quantity or proportion of the County waste stream diverted from landfilling through recycling, composting, resources recovery, and alternative packaging.

Objective Achievement Analysis. DSWM is required to submit municipal solid waste management data to the Florida Department of Environmental Protection (FDEP) annually. Each county is required to report the amount of Municipal Solid Waste (MSW) disposed of at solid waste disposal facilities by type, the amount and type of materials from the MSW stream that were recycled, and the percentage of the population participating in various types of recycling activities. County recycling tonnage data is a combination of "recovered materials" data provided by the FDEP Certification of Recyclers program and County data for recycled materials not included under the statutory definition of recovered materials (such as yard waste, tires, process fuel, etc.).

Table 2.5.2-4 lists the Miami-Dade County waste products collected and recycled, by tonnage and percent of the waste stream, the proportion recycled by the public and private sectors, and the total percent recycled, for each component of the waste stream, and in aggregate. The table

indicates that 9.4 pounds per capita of waste are generated within Miami-Dade County each day, a reduction from the 9.9 pounds per capita that DSWM estimated in 1994-95. Of this, 31 percent is generated from single-family residences, a reduction from 45 percent reported in 1995. The remainder is generated by commercial and multi-family residential accounts. The largest proportions of the waste stream collected are yard trash (14 percent), construction and demolition (C&D) debris and miscellaneous (12 percent each), and corrugated paper and other paper (10 percent each).

Table 2.5.2-4
Waste Products Recycled by Miami-Dade County, Jan. 1, 2001 - Dec. 31, 2001

Pop. Est. 2001 2,283,319	Collected Tons	% Total Tons	Lbs. Per Cap/Day	Recycled Public	Private	Total	% Recycled
1. Minimum 5 Materials (f)							
a. Newspaper	208,446	5	0.50	28,700	27,000	55,700	27
b. Glass	115,802	3	0.28	14,423	7,356	21,779	19
c. Aluminum Cans	27,021	1	0.06	1,568	1,511	3,079	11
d. Plastic Bottles	42,460	1	0.10	5,511	3,407	8,918	21
e. Steel Cans	77,203	2	0.19	25,523	4,278	29,801	39
2. Special Waste Materials (g)							
a. C&D Debris (I)	484,417	12	1.16	0	62,005	62,005	13
b. Yard Trash	545,576	14	1.31	44,472	0	44,472	8
c. White Goods (h)	34,310	1	0.08	5,585	28,725	34,310	100
d. Tires	18,784	0	0.05	852	6,372	7,224	38
e. Process Fuel (I)	NA	NA	NA	78,876	0	78,876	0
3. Other Waste Materials							
a. Other Plastics	185,278	5	0.44	418	228	646	0
b. Ferrous (h)	351,273	9	0.84	8,434	171,693	180,127	51
c. Non-ferrous	77,203	2	0.19	3,402	24,684	28,086	36
d. Corrugated paper	401,444	10	0.96	3,179	139,744	142,923	36
e. Office Paper	181,430	5	0.44	281	14,348	14,629	8
f. Other Paper	409,156	10	0.98	325	17,559	17,884	4
g. Food	154,399	4	0.37	0	0	0	0
h. Textiles	146,678	4	0.35	0	500	500	0
i. Misc.	457,367	12	1.10	372	63,100	63,472	14
4. Total	3,918,247	100	9.40	221,921	572,510	794,431	20.3
				FL Cert. (excl. rubber)		538,382	

Note: FL Certified (materials) excludes lines 2a, 2b, 2d, 2e, and 3i.
Source: 2002-2003 Municipal Solid Waste Management Report, for Miami-Dade County. Submitted to Florida Dept. of Environmental Protection, November 2002, by DSWM.

A recycling rate of 20.3 percent is reported for calendar year 2001; 24 percent was reported for FY 1992-93 in the 1995 EAR. According to FDEP, recycling rates are intended to comply with provisions of Section 403.706(4)(a), F.S., which contains a 30 percent waste reduction goal. Until July 1, 2002, this goal could be met with "no more than half" of that percentage made up of yard trash, white goods, C&D debris, and tires "that are removed from the total amount of municipal solid waste."

After passage of Chapter 202-291, Laws of Florida, which became effective on July 1, 2002, this cap was eliminated and the full amount of those items that are recycled can count towards the recycling goal. FDEP also reports that in the recent past, recycling rates reported by many

counties may have been artificially high due to the inclusion of non-MSW C&D debris numbers. However, FDEP has now improved its accounting procedures to greatly reduce the inclusion of non-MSW materials in the amount of C&D debris reported. The special waste recycling percentage in Miami-Dade was as 5.8 percent in 2001 (Total recycled amounts of Special Waste Materials, lines 2a. through 2e., or 226,887, divided by the total amount of collected tons of all materials, or 3,918,247).

No composting and/or mulching products are being produced due to Citrus Canker quarantine.

In 1992 the County Commission adopted Resolution No. R-214-92, which established a County procurement policy favoring waste-reduction and implementation of a program to purchase commodities containing recycled or recyclable content. Since adoption of this resolution, an estimated $150 million worth of the County's general services departmental purchase orders, have been issued for materials with recycled content. In 2000, the Procurement Management Division of the General Services Administration (GSA) separated from GSA as the new Department of Procurement Management (DPM). DPM reports having no data as to the quantity of products purchased by the County containing recycled material. Furthermore, the County apparently had no mandatory procedures in place as of early 2003 for preferential procurement of products with recycled or recyclable content.

At the same time, the County continues to have a Recycling Management Committee (RMC) that was created in 1992 pursuant to Resolution No. R-214-92. The Committee was initially chaired by the GSA procurement director and included members from County departments most affected by recycling programs. The Committee was to recommend modifications to ordinances, administrative orders, recycling program goals and operating procedures.

According to background information attached to County Resolution R-374-03 adopted by the County Commission in April 2003, upon formation of DPM in 2000 the RMC began focusing its efforts on promoting waste reduction and the use of recycled and recyclable products. The RMC also determined that it could better facilitate such activities under the purview of the Department of Environmental Resources Management (DERM). It is further anticipated that with DERM oversight, the RMC can assist County departments in other environmentally preferable activities in addition to procurement of recycled products. The resolution further clarifies the responsibilities of DERM and DPM with respect to waste reduction and the use of recycled and recyclable products; activities and responsibilities of a new Resource Conservation Committee chaired by the DERM director or director's designee; and adherence to policies under Solid Waste Subelement Objective 4.

The Resources Recovery Facility (RRF) converts garbage and trash into refuse-derived fuel, which is then burned in four boilers that produce steam to turn two turbine generators. Energy produced from burning the fuel is enough to power the plant and supply the average power needs of 40,000 households per year.

Some progress has been made in achieving Objective 4. Measures indicate that residents of the County are generating less waste per capita. Therefore, although the total amount of waste increased, the total is less than the amount that would have been generated had per capita rates remained the same or increased. While recycling data indicates that a smaller proportion of the

waste stream is being recycled, this may be the result of streamlined state reporting methods mentioned previously. Recycling and purchase of recycled products by County departments is anticipated to increase under the auspices of the newly established Resource Conservation Committee.

Policy Relevance. The objective and policies under Objective 4 were reviewed for continued relevance. Listed below are those policies requiring modification.

Policy 4B. The directive to reduce disposal through increased reliance on recycling programs should be modified to delete a mandated increase in recycling, but refer instead to an increase in recycling and alternative technologies.

Policy 4E. The policy directs that yard trash disposal will be minimized through several specific programs or technologies. As circumstances can and surely will change through time, the policy should be modified to reflect such situations.

Objective 5

Miami-Dade County shall provide for the safe and efficient disposal of wastes through the development and maintenance of an integrated solid waste disposal system utilizing proven technologies, appropriate regulation, and equitable and responsible financing practices.

CDMP Monitoring Measure. Initiation and maintenance of an integrated solid waste system.

Objective Achievement Analysis. The measurements recommended include: proportion of operating and capital development costs of current and planned solid waste disposal facilities generated through user fees and sources other than County general fund revenues or fees or charges to County residents or firms for services other than solid waste collection and disposal.

It is unclear how the measurement of operating and capital development costs of current and planned facilities adequately indicates the initiation and maintenance of an integrated solid waste system, inasmuch as the objective also refers to proven technologies and regulation in addition to equitable and responsible financing practices. An integrated waste management system is cited as including recycling, landfilling, and incineration. Such a system could also include provisions for both public and private sector involvement. Table 2.5.2-5, below, illustrates the utilization of various waste management methods through both the public and private sector in Miami-Dade County to process/dispose of waste.

For calendar year 2001, the majority of waste in Miami-Dade County, 52.76 percent, was landfilled. Of the 52.76 percent landfilled, 31.26 percent was disposed of in privately-held landfills, while 21.49 percent was disposed of in public facilities. Slightly more than one-quarter of the waste stream was incinerated. Of the 26.97 percent incinerated, 18.98 percent was incinerated at publicly owned facilities and 7.99 percent was incinerated at privately owned facilities. The smallest amount of the waste stream, 20.28 percent, was recycled, most of that in the private sector. Private sector recycling accounted for 14.61 percent of the total recycling rate

of 21.49 percent, while 5.66 percent of the waste stream was recycled by the public sector. In aggregate, 46.14 percent of waste was handled by the public sector and 53.86 percent was handled by the private sector directly or via public/private partnerships.

Table 2.5.2-5
Method of Waste Treatment, January-December 2001

Public/Private Sector And Technology	Tons of of Waste	Proportion	Proportion By Sector Public	Proportion By Sector Private
Public Sector Recycling	221,921	5.66%	5.66%	
Private Sector Recycling	572,510	14.61%		14.61%
Total Recycling	794,431	20.28%		
Public Sector Landfilling	842,136	21.49%	21.49%	
Private Sector Landfilling	1,224,960	31.26%		31.26%
Total Landfilling	2,067,096	52.76%		
Public Sector Incineration	743,824	18.98%	18.98%	
Private Sector Incineration	312,896	7.99%		7.99%
Total Incineration	1,056,720	26.97%		
Total Waste Generated	3,918,247	100.00%	46.14%	53.86%

Source: Department of Solid Waste Management, 2003.

Tables 2.5.2-6 and 2.5.2-7 indicate fiscal information. Table 2.5.2-6 is the DSWM capital plan for Fiscal Year 2002-2003. The table illustrates capital disposal projects, the expenditures for those projects, and the source of revenue to pay for the projects. Disposal projects listed cost a total of $63,578,000. Of the capital disposal projects, only Lot Clearing Countywide is funded, at $1 million, from the General Fund, which is appropriate as these are not DSWM assets. Other capital projects are funded through disposal and collection system operating funds, which are generated from solid waste system user fees and charges, and bonds revenues.

Table 2.5.2-7 is a schedule of revenues and expenses for the DSWM disposal system for the fiscal years ending September 30, 2000 through 2002. The table shows, for each year, the total operating revenues and expenses, depreciation, closure and postclosure costs for inactive landfills, non-operating revenues and expenses, and the net operating income or loss. Operating revenues were derived from user fees and surcharges associated with waste disposal, operating private waste management firms within Miami-Dade County, the Utility Service Fee, the Disposal Facility Fee, and from the sale of electrical power generated; at the Resources Recovery Facility. Operating expenses were for facility maintenance and operations, enforcement and environmental compliance, and recycling and other operating expenses.

Table 2.5.2-6
Solid Waste Management Capital Projects, 2002-2008

Capital Disposal Projects Facility	Expenditure (In Thousand of $) Prior Years	2002-03	Future Years	Total	Source of Revenue (In Thousands of $) Disposal Operating Funds	Solid Waste Rev Bonds	Other Revenue Bonds	Bond Antcptn Notes	Capital Outlay Reserve	Collection Operating Funds
Central Compactor Replacement	$0	$125	$4,175	$4,300	$4,300					
Central Compactor Overhaul	$276	$224	$0	$500	$14	$486				
Disposal Facility Improvements	$0	$200	$1,000	$1,200	$1,200					
Environmental Improvements	$483	$39	$300	$822	$666	$47		$109		
Lot Clearing Countywide	$0	$1,000	$0	$1,000					$1,000	
No. Dade Landfill Gas Extraction	$2,167	$833	$0	$3,000		$3,000				
No. Dade Landfill Gas Extraction	$0	$200	$1,800	$2,000	$1,800	$200				
No. Dade Landfill Groundwater	$0	$200	$1,300	$1,500	$1,500					
North Dade Leachate Pre-Treatment	$440	$220	$0	$660		$660				
NE Compactors Replacement	$0	$290	$2,020	$2,310	$2,310					
NE Compactors Overhaul	$200	$100	$0	$300		$300				
NE Site Improvement	$4,676	$850	$150	$5,676	$792	$3,069		$815		$1,000
NE Tipping Floor Crane Replacement.	$0	$0	$200	$200	$200					
Resource Recovery 3rd Landfill Cell	$125	$875	$2,500	$3,500	$2,868	$632				
Resource Recovery Additional Retrofit	$14,205	$4,187	$0	$18,392	$17,342		$1,050			
Resource Recovery Cell 17 Closure	$150	$200	$100	$450		$450				
Resource Recovery Cell Closures	$0	$50	$5,500	$5,550	$5,550					
South Dade Cell 3 Closure	$1,308	$1,640	$7,800	$10,748	$9,490	$910		$348		
South Dade Groundwater	$570	$430	$0	$1,000		$1,000				
West Dade Replacement of 3rd Crane	$200	$20	$0	$220	$220					
West Dade Replacement of 4th Crane	$0	$0	$250	$250	$250					
	$24,800	$11,683	$27,095	$63,578	$48,502	$10,754	$1,050	$1,272	$1,000	$1,000

Lot Clearing Countywide	$1,000.00
Environmental Projects	$7,999.00
Waste Disposal	$2,684.00
	$11,683.00

Prior, Current, Future Disposal Operating Funds	$48,502
Solid Waste System Revenue Bonds	$10,754
Bond Anticipation Notes	$1,272
Industrial Dev., Other Revenue Bonds	$1,050
County Capital Outlay Reserve	$1,000
Collection Operating Funds	$1,000
	$63,578

Source: Miami-Dade County Capital Budget, 2002.

Analysis of the monitoring measures and other data indicates that there has been progress toward the objective. Both the public and private sectors are included in solid waste disposal activities in the County. The disposal system relies on more than one method of disposal, which may indicate that the most appropriate method of disposal is utilized for different types of waste. Fiscal tables indicate that the County's General Fund is not used to subsidize the solid waste disposal system but that the actual users of the system provide disposal funding. Further, after a series of waste diversions in the early and mid-1990's created shocks to the system, DSWM responded with several countermeasures that were designed to place more responsibility for system costs on users, utilize the private sector for some disposal capacity, and bring more efficiency into DSWM operations.

Table 2.5.2-7
Solid Waste Management Disposal System
Statement of Revenues and Expenses, FY 2000-2002
(In thousands of dollars)

	Fiscal Year Ending September 30		
	2002	2001	2000
Operating Revenues		(In thousands of dollars)	
Solid waste disposal services	52,982	47,394	57,622
Utility service fees	14,528	14,587	15,323
Electricity sales	16,383	15,080	15,671
Other operating revenues	8,212	8,560	8,383
Total Operating Revenues	92,105	85,621	96,999
Operating Expenses			
Landfill & disposal operations	19,042	5,290	28,592
Waste-to-energy	61,366	61,550	58,970
Transfer operations	16,617	15,189	13,196
Recycling	181	70	99
Facility maintenance	743	708	725
Countywide lot clearing	84	4	0
Enforcement and environmental compliance	3,421	4,046	4,552
General and administrative	9,022	8,022	7,430
Total Operating Expenses	110,476	94,879	113,564
Depreciation	20,109	19,912	11,208
Closure & post closure care costs (recover) for inactive landfills	(2,412)	(1,000)	704
Operating loss	(36,068)	(28,170)	(28,477)
Non-operating revenues (expenses)			
Interest income	2,041	3,837	3,709
Interest expense	(9,224)	(8,777)	(7,954)
Intergovernmental revenue	180	1,135	1,136
Other non-operating, net	(539)	(307)	(1,684)
Total Non-Operating Revenues (Expenses)	(7,542)	(4,112)	(4,793)
Loss before capital contributions	(43,610)	(32,282)	(33,270)
Capital contributions	9,986	10,569	0
Net Gain (Loss)	($33,624	($21,713)	($33,270)

Source: Department of Solid Waste Management, 2002, 2003
* Before depreciation and closure and post-closure care costs for inactive landfills

Policy Relevance. The policies under Objective 5 were reviewed for continued relevance. Listed below are those policies requiring modification.

Objective 5. The objective refers to providing for an integrated solid waste disposal system. A modification may be warranted to further clarify and expand on current language to place more emphasis upon "equitable and responsible financing" of the solid waste disposal system.

Policy 5B should be considered for deletion.

Policy 5D. This new policy should refer to equitable and responsible financing of disposal system costs, to be met through a combination of user fees, environmental protection fees, and capacity-related fees, without County general fund subsidy. The exception would be when the solid waste services provide a corresponding benefit to the general community, rather than exclusively or principally to the solid waste systems users paying the fees, in which case the general community should fund the cost.

Objective 5 Monitoring Measure. The Monitoring Measures recommended for the Objective 5 are: 1) the relative amounts of waste managed through recycling, incineration, and landfilling, by both the public and private sectors, be used as a measure of the level of "integration" of the solid waste management system; 2) relative amounts of funding, provided by user fees, environmental fees, and capacity-related fees, as a measure of financing equity; 3) solid waste management disposal system schedule of operating revenues and expenses (available in solid waste management department annual financial report).

Objective 6

Substantially reduce or minimize the amount of household hazardous wastes and used motor oil that are disposed of in an unsafe or improper manner.

CDMP Monitoring Measure. Promote safe disposal of household hazardous wastes.

The measurements recommended include: number of customers using household hazardous waste drop-off (including used motor oil) at Neighborhood Trash and Recycling Centers and the amount of each major category of household hazardous waste disposed of should be added to the Solid Waste Monitoring Program.

As a surrogate measure, the quantity of used motor oil recycled in the County can be used as a proxy for all hazardous waste disposed in a proper manner.

Objective 6 Achievement Analysis. Table 2.5.2-8 below contains data from the Home Chemical Collection Program, dating to the year ended September 30, 1995. The aggregate data is also shown geographically in Figure 2.5.2-2 below. In addition to mobile events held at temporary sites, household hazardous chemicals are collected at the centrally-located Permanent Home Chemical Collection Center located at 8831 NW 58 Street. Household chemicals such as motor oil, paints, pesticides, solvents and pool chemicals are accepted through this program. Used motor oil is also accepted at several Neighborhood Trash & Recycling Centers. Mobile collection events were temporarily suspended in 1995 and reinstated in 1997.

Table 2.5.2-8
Home Chemical Collection Program

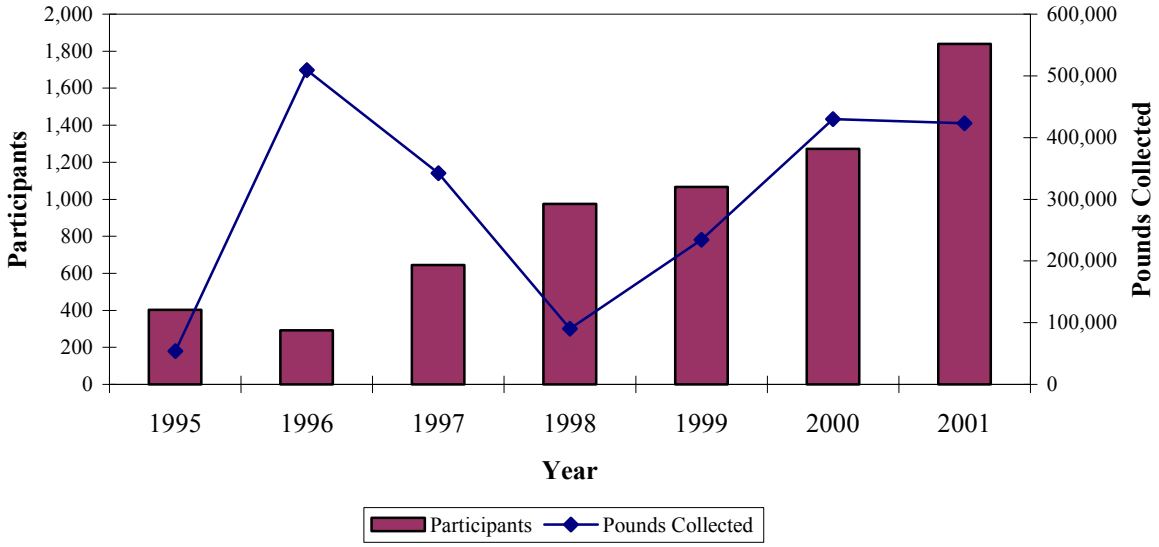
Location	1995	1996	1997	1998	1999	2000	2001
	Participants						
	Fiscal Year Ending September 30 of Each Year						
MDCC-North					44	40	87
MDCC-South				667	440	348	618
Homestead			324		109	115	130
Pro Player Stadium Permanent Center	402	292	320	308	474	769	1,005
Total Participants	402	292	644	975	1,067	1,272	1,840
Location	Pounds						
MDCC-North					2,992	2,869	4,533
MDCC-South				64,201	29,877	27,959	29,844
Homestead			36,375		5,609	18,628	8,513
Pro Player Stadium Permanent Center	53,691	509,402	305,819	*25,872	195,960	380,196	380,228
Total Pounds Collected	53,691	509,402	342,194	90,073	234,438	429,652	423,118

* Estimated
Permanent Center pounds collected may include used oil dropped off at Trash & Recycling Centers, household batteries collected at curbside, and latex paint.
Source: Department of Solid Waste Management, 2003.

The number of participants in the Home Chemical Collection Program has increased since 1995, and is currently approaching 2,000 residents. This may be explained by the availability to the community of both a permanent center and mobile collections events set up in specific regions of the County for disposal of household chemicals. The number of participants utilizing the Permanent Center rose each year between 1998 and 2001, which may be due in part to the establishment of regular operating hours on a twice-weekly basis.

Data analysis indicates that substantial progress has been made in achieving Objective 6. The objective should be retained.

Figure 2.5.2-2
Home Chemical Collection Program, 1995-2001



Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained, although it may be possible to combine some of the policies or eliminate those that are outdated.

Objective 6 Monitoring Measure. Modify this monitoring measure to retain the amount of hazardous wastes collected and number of patrons served at collection sites, but with acknowledgement of new locations such as the "Permanent Center" or satellite sites (including Trash & Recycling Centers) or special collection events.

2.6 RECREATION AND OPEN SPACE ELEMENT

The Recreation and Open Space Element sets Miami-Dade County's Goal, objectives, and policies for meeting the present and future recreational needs for all residents and visitors. The Element specifically addresses open spaces and facilities that provide recreational opportunities as their primary function (recreation open spaces). Miami-Dade County contains many open spaces that serve a primary purpose other than public recreation and while these open spaces have a significant recreational and aesthetic value, they are addressed in the EAR evaluations for other Elements. These open spaces, including such examples as the National and State parks and preserves as well as State Water Conservation Areas and other wetlands, which have critical environmental and wildlife value, are addressed in the Conservation, Coastal Management, and Land Use Elements. Other open spaces such as the agricultural areas and open lands are addressed in the Land Use Element.

Objective 1

Provide a coordinated system of areawide parks and recreational open spaces serving the entire County, and local recreation open spaces adequately meeting the needs of Dade County's unincorporated population, through the year 2005.

CDMP Monitoring Measure. A comparison of the Countywide areawide park acreage in 1995, at the date of report, and projected for the year 2005. A comparison of the local recreation open space LOS in 1995, at the date of report, and projected for the year 2005.

Objective Achievement Analysis. Miami-Dade County is responsible for the provision of areawide recreational open space throughout the County, and of local recreation open space to unincorporated areas. Service areas for local recreation open spaces and park classifications, as determined by Miami-Dade Park and Recreation Department (PARD) are the primary criteria used to determine future park locations and conduct capacity evaluations. The service areas are based on park size, existing or planned facilities, and public recreation demand. Table 2.6-1 summarizes the County's park classification criteria and service areas.

Tables 2.6-2 and 2.6-3, below, show Areawide and Local recreation open space under the control of the PARD. Areawide recreation open spaces are defined in the Recreation and Open Space Element of the CDMP as meeting the diverse recreational needs of Miami-Dade residents and tourists on a Countywide basis, and are classified as metropolitan parks, natural area preserves, special activity areas, and/or greenways. Local recreation open spaces are described as meeting the close-to-home recreational needs of the residents of specific areas within the County, and area classified as mini-, neighborhood, single-purpose, community, and district parks. Local recreation open spaces furthermore include designated public school and college playfields and portions of private recreation open space.

Table 2.6-1
Recreation Open Space Classifications
Type of Recreation Open Space

	Countywide				Local				
Criteria	Metropolitan	Natural Area Preserves	Greenway	Special Activity	District	Single-Purpose	Community	Neighbor-hood	Mini Park
Primary Orientation	Resource	Resource	Resource	Resource	User	User	User	User	User
Staff Available	Yes	Varies	No	Yes	Yes	Yes	Yes	No	No
Programs Available	Varies	Varies	No	Yes	Yes	Yes	Yes	No	No
Acres	Varies	Varies	Varies	Varies	200+	Varies	20-100	1-10	1/2
Service Area	Countywide	County-wide	County-wide	County-wide	5 Miles	3 Miles	3.5 Miles	1 Mile	.5 Mile

Source: (1) Miami-Dade Park and Recreation Department, 2002
(2) Miami-Dade Park and Recreation Areas--Summary of Park Classification, December 2000.

In 1995, the County had 8,942 acres of areawide parkland and counted 4,564 acres of local recreation open space. The County has added 536 acres of parkland in the intervening time period, and in 2003 counts 8,978 acres of areawide parkland and 5,063 acres of local parkland. Overall, the 536-acre increase equates to 3.97 percent more acreage; of those 536 acres, 500 acres, or 10.96 percent, is comprised of local parkland, and 36 acres, or 0.4 percent, of areawide parkland.

Table 2.6-2
Areawide Park Acreage

Park	1995		2003	
Classification	Acres	Sites	Acres	Sites
Metropolitan	3,037	14	3,765	15
Special Activity Area	3,663	36	3,460	26
Natural Area Preserve	2,177	NA	1,655	13
Greenway	65	20	99	20
	8,942	70	8,978	74

Source: Miami-Dade County Park and Recreation Dept., 2003

Of the areawide park acreage, there have been increases in the metropolitan and greenway classifications, of 728 and 33 acres respectively, but declines in acreage of special activity areas and natural area preserves, of 203 acres and 523 acres respectively, as Table 2.6-2 indicates. Two Areawide parks, 192 Street Beach and Gilbert Samson Park, were conveyed to the City of Sunny Isles Beach between 1995 and 2003. Natural Area areas were reduced by over 700 acres by reclassifying one area from Recreation Open Space to Conservation Open Space. Moreover, a number of Environmentally Endangered Lands properties that were immediately adjacent to parks and managed by the PARD were merged into park properties for inventory purposes. During this same time, two Special Activity Areas, Vizcaya Museum and Gardens and the Seaquarium, were removed from the inventory due to changes in management assignment.

In the Local park category, the district, community, neighborhood, and single purpose classification parks show increased acreage in 2003 over 1995, by 471, 362, 18, and 102 acres respectively, while the mini-park acreage declined by 29 acres, from 59 acres in 1995 to 30 acres

in 2003. The amount of school acres utilized for local park purposes declined by 169 acres, from 1,349 acres in 1995 to 1,180 acres in 2003, and the amount of private recreation open space counted for public park purposes declined 256 acres, from 629 acres in 1995 to 373 acres in 2003. Virtually all reductions in private recreation open spaces are accounted for by areas lost to recent incorporations in Aventura, Pinecrest, and Sunny Isles Beach. School acres lost is similarly accounted for by incorporations. Several Local parks were conveyed to municipalities as a result of incorporations, annexations, or other means. These were Suniland Park, Coral Pine Park, Kendall Wayside Park, Royal Oaks Park, Miami Lakes Park, Miami Lakes West Park, and the Miami-Lakes Special Taxing District mini-parks.

Table 2.6-3
Local Park Acreage

Park	1995		2003	
Classification	Acres	Sites	Acres	Sites
District	1,032	3	1,503	6
Community	989	77	1,351	71
Neighborhood	437	76	455	79
Single Purpose	69	13	171	15
Mini-Park	59	120	30	37
School	1,349	<120	1,180	191
Private	629	NA	373	585
Total	4,564	<409	5,063	984

Source: Miami-Dade County Park and Recreation Dept., 2003

PARD provides the Department of Planning and Zoning projections of local recreation open space twice a year. The most recent analysis completed in July 2002 by PARD extends to the year 2007 and breaks down parkland inventory and need based on Level of Service by Park Benefit District (PBD). According to the PARD analysis, there will be 5,444 acres of local recreation open space provided to the unincorporated population in 2007. PARD's capital budget also projected spending more than $22,940,000 on acquisition of land and buildings for local parks in PBDs 1, 2, and 3, through the fiscal year ending September 2007, which would total approximately 435 acres of land, according to Table 2.6-4.

Table 2.6-4
Projected 2002-2007 Local Recreation Open Space Level of Service

Park Benefit District	Projected 2007 Unincorporated Population (1) Plus Permitted Development	2002 Total Recreation Open Space Acreage (2)	2002-2007 Public Park Land Acres Addition (2)	2002-2007 School Playfield Acres Addition (3)	2007 Total Local Open Space Acres	Standard @ 2.75 Acres Per 1,000 (Acres)	Year 2007 Surplus/ (Deficit) Acres	2007 Percent of Standard
1	563,985	1,985.91	180.48	0.00	2,166.39	1,550.96	615.43	139.68
2	654,979	2,246.18	224.67	13.00	2,483.85	1,801.19	682.66	137.90
3	174,226	763.03	30.30	0.00	793.33	479.12	314.21	165.58
Total	1,393,190	4,995.12	435.45	13.00	5,443.57	3,831.27	1,612.30	142.08

(1) Miami-Dade County Department of Planning and Zoning, Research Section July 2002
(2) Miami-Dade County Park and Recreation Department, Planning and Research Division, July 2002, Park Impact Fee Ordinance (90-59), previously approved developer donations, and General Obligation Bond Acquisition: Safe Neighborhood Park Act of 1996.
(3) Miami-Dade County School Board, Site Planning Department, 2000.

The objective has been achieved. A coordinated system of park and recreation open spaces continues to be provided to Miami-Dade County residents and visitors. Acreage provided has increased, at the same time that two small parks along the coast and some local parkland has been transferred to the municipalities that the parks are located within.

Policy Relevance. The policies under Objective 1 were reviewed for continued relevance. Target dates in Objective 1 should be changed from 2005 to 2010. Other than Policy 1B, all policies are still relevant and require no changes as identified.

Policy 1B defines what comprises the meaning of local recreation open spaces. One type includes public school and public college playfields, and makes reference to the State Board of Regents, a board which has been disbanded by State law and then reinstituted by State Constitutional change, but which has had its function change. A suggestion is change the policy to refer to public college and university governing boards.

Objective 2

Require the availability of adequate local recreation open space as a condition for the approval of residential development orders, and maintain an adequate inventory of recreational areas and facilities through the year 2005.

CDMP Monitoring Measure. Achievement of the LOS standard. A comparison of the proportionate share of the LOS standard comprised of public parkland at the date of adoption and date of report.

Objective Achievement Analysis. The LOS standard is applied to local recreation open space. As defined in Policy 1B, local recreation open space includes: County-provided mini-parks, neighborhood parks, community parks, single-purpose parks, and portions of district and areawide parks used as local recreation open space; public school and college playfields used as local recreation open space and included in joint Park-School agreements between the county and the Miami-Dade County Public School System or public colleges and universities, (for example, Florida International University) and; 50% of the private recreation open space inside the Urban Development Boundary (UDB).

The 1995 EAR reported that there were 3,907 acres of local recreation open space provided for meeting the LOS standard in 1994, increasing to 4,564 acres in 1995. That acreage easily met the LOS, which required 3,270 acres of local recreation open space, based on a population of 1,188,973 persons in the unincorporated area, including permitted development. [Note: In 1994, Aventura (1995), Pinecrest (1996), and Sunny Isles Beach (1997) had not yet incorporated and were still included in the 1994 population estimates and permitted population included in the preceding figure]. In Park Benefit District (PBD) 1, local recreation open space was provided by 1,672 acres, at a rate of 3.11 acres per 1,000 unincorporated residents, and exceeding by 196 acres the required 1,476 acres to meet LOS. For PBD 2, 1,741 acres were provided, at a rate of 3.17 acres per 1,000 residents, exceeding by 232 acres the required LOS of 1,509 acres. PBD 3

contained 492 acres of local recreation open space, with 4.78 acres per 1,000 residents, exceeding by 208 acres the required 284 acres.

The 2003 local recreation open space acreage and population located in the unincorporated portions of the three PBDs are compared in order to calculate the actual LOS. Table 2.6-5 depicts the local recreation open space LOS by PBD as of February 2003. Municipal facilities and incorporated-area population figures are excluded from this analysis. Overall, there were 5,063 acres of local recreation open space counted for determining conformance with the LOS standard, or 159 percent of the required 3,182 acres. The 2000 unincorporated population was 1,157,143, excluding Miami Lakes (incorporated in 2000) and Palmetto Bay (incorporated in 2002). In PBD 1, 2,004 acres, or 153 percent of the 1,311 acres required to meet the LOS standard, were provided, 693 acres in excess. In PBD 2, LOS was exceeded by 804 acres. 2,285 acres were provided, 154 percent of the 1,481 acres that LOS required. In PBD 3, 199 percent of the 390 acres required to meet LOS were provided. PBD 3 contained 775 acres of local recreation open space.

Table 2.6-5
Local Recreation Open Space and Level of Service

Park Benefit District	1995 LOS	2000 Unincorporated Population	2003 Total Acres	2003 Acres Required	2003 LOS
1	113%	476,880	2,004	1,311	153%
2	115%	538,564	2,285	1,481	154%
3	173%	141,699	775	390	199%
Total	119%	1,157,143	5,063	3,182	159%

Source: Miami-Dade Park and Recreation Department, 2003.

In 2003, the PARD was able to provide the LOS acreage required without the additional acres provided by counting school and private recreation open spaces. As Table 2.6-6 shows, the 3,510 acres of local recreation open space provided Countywide by PARD was 1.1 times the 3,182 acres of required LOS. This demonstrates that the County has satisfied a new policy directive to increase the County's proportionate share of the total local recreation open space required within unincorporated areas to 80 percent of the LOS standard. Corresponding data from 1995 was unavailable. Additionally, the 3,510 acres provided by the PARD in 2003 was 69.3 percent of that 3,510 acres, land included in joint parks-school agreements accounted for another 1,180 acres, or 23.3 percent, and private recreation open space counted toward the LOS standard accounts for the balance, 373 acres, or 7.4 percent of the acreage. This represents an increase since 1995, when PARD provided 56.7 percent of the local recreation open space, 29.6 percent was provided under joint parks-schools agreements, and 13.8 percent was provided as private recreation open space. This indicates that the County's ability to provide for local recreation open space has increased over the past several years, without having to rely upon land provided by the school board or private acreage.

Table 2.6-6
Proportions of LOS

Site	1995 Acres	1995 LOS Proportion	2003 Acres	2003 LOS Proportion	2003 Park Acres/ LOS Std.
Park	2,586	56.7%	3,510	69.3%	1.10
School	1,349	29.6%	1,180	23.3%	
Private	629	13.8%	373	7.4%	
	4,564		5,063		

Source: Miami-Dade Park and Recreation Department, 2003.

Analysis of the data included as part of the monitoring measures indicates that the objective has been achieved. Overall, in 2003 the County provided proportionately more of the total local recreation open space than it was able to provide in 1995. In other words, the County relied less on the public schools and/or private recreation land to provide for the recreational needs of the County's residents in the unincorporated area. In addition, the County is also better providing overall for those recreational needs. While 119 percent of the overall level of service was provided in 1994, 159 percent of the level of service is being provided in 2003. As a result, residents of the unincorporated area are being provided with 4.375 acres of recreation open space for each 1,000 residents, compared to the LOS standard of 2.75 acres for each 1,000 residents, a difference of 1.625 acres per thousand population.

In conclusion for this objective, the County has more than adequately provided recreation open space land for the needs of current and future residents of the unincorporated area. This provides insurance that, with further residential development in the County, sufficient land will be available for the recreational needs of inhabitants, having been reserved from development. An added benefit of reserving recreation land early is that the land was probably obtained at prices more inexpensive than after further development has already driven up land costs.

Policy Relevance. The policies under Objective 2 were reviewed for continued relevance. In Objective 2, the target date will be changed from 2005 to 2010.

Policy 2A. Under Policy 2A.ii., a local recreation open space of 5 acres or larger within 3-1/2 miles from a residential development is listed as a minimum standard. This has been part of LOS since at least 1988. Population has increased in the County since that time, as has traffic congestion. Especially with the additions to the inventory of parks and open spaces cited above, most areas are within that 3-1/2 mile standard. However, striving for better service and facility provision is not unwarranted. National standards list a range of from 0.5 to 3 miles as the distance to travel to a community park of more than 20 acres, or 0.5 miles to neighborhood parks of at least 5 acres. The local open space standard needs to be reviewed with regard to residential densities. A reduction in the 3-1/2 mile standard, or a reference to a time-based standard in addition, would not be inconsistent with the above discussion.

Policy 2B. This policy is generally explanatory, providing a way to measure level of service for local recreation open space. However, part of the policy directs the County and the PARD to move toward providing proportionally more of the acreage than is available from public schools and colleges and private recreation open spaces. This policy directive may need to be made

more consistent with policies under Objective 4 that call upon the County to partner with other agencies and organizations, including the Miami-Dade Public Schools, to provide recreation open spaces and facilities.

Objective 3

Access to parks and recreational facilities will be improved in Dade County by 2000.

CDMP Monitoring Measure. The amount of funds expended for and number of capital projects improving on-site access for automobiles, bicycles, pedestrians, and mass transit to Dade County's recreation and open space facilities between 1995 and 2000. The number of projects and amount of funds expended for improving the handicapped accessibility of Dade County's recreation and open space facilities between 1995 and 2000. The number of projects and amount of funds expended for the acquisition and protection of Dade County's beaches for preservation and increased public access.

Objective Achievement Analysis. The Miami-Dade Park and Recreation Department has worked to facilitate automobile access to community and district parks by purchasing larger-sized properties that are capable of supporting off-street parking, along section and half-section line roads and arterial highways. Of the 42 sites acquired by PARD since 1995, 16 are larger community and district parks located on major streets, roads, and expressways. Additionally, linkages of mass transit to parks, particularly bus routes, have improved since 1995. Bus stops have been established within major parks like MetroZoo and Haulover and Tropical Parks. Furthermore, interagency agreement with the Miami-Dade Transit Agency (MDTA) has improved the efficiency of major special events through the use of bus shuttles to events within Crandon Park. Pedestrian and bicycle accessibility has also been improved to park and recreation sites through new rules and funding. The Board of County Commissioners approved Ordinance No. 99-81 requiring that all parks, among other locations, provide bicycle stands. An additional 22 bicycle racks are due to be installed at 12 to 14 parks, according to a January 2003 report to the Commission's Recreation and Cultural Affairs Committee. The 1996 Safe Neighborhood Park bond issue provided almost $2 million for the South Dade Greenway network, one segment of which connects five different parks located near Black Point Park. Additional funding was provided by the State for blueway improvements along Biscayne Bay, including boating access to many parks.

A number of projects have expanded bicycle access to County parks and recreational facilities since 1995. These include the South Dade Trail, running along the US 1 Busway from Dadeland South Metrorail station to SW 112 Avenue; the Everglades Trail and the Southern Glades Trail, running along the C-111 canal outside Everglades National Park's main entrance; bike lanes along SW 137 Avenue between SW 288 Street and SW 328 Street; the Turnberry Island County Club path that runs around the Turnberry Island golf course in Aventura; the Virginia Gardens/Miami Springs Bike Path, running along the Ludlam and Miami Canals; the Snake Creek Trail that runs along the C-9 Canal in North Miami Beach; and the FIU North Bike Path that extends around the perimeter of the campus. The total expense for these trails amounted to $3,326,925.

In addition, since 1995 MDTA has instituted a "Bikes on Buses" program to outfit buses with racks that carry two bicycles. Almost half of the routes now use such rack-equipped buses and the agency continues to add routes. The goal is to have the entire bus fleet equipped with bike racks by 2004.

Two additional policies under Objective 3 are associated with monitoring measures. Policy 3B aims to improve access for persons with disabilities by removing architectural barriers to program participation including compliance with provisions of the Americans with Disabilities Act (ADA). Policy 3C targets preservation and protection of beaches and shores and maximized public ownership of coastal resources as well as increased access points to the waterfront and coast.

PARD reported that the agency had completed the Transition Plan for the identification and removal of architectural barriers in order to increase recreational facility accessibility, complying with the Americans with Disabilities Act (ADA). The Transition Plan categorized the three stages necessary to move facilities into full compliance with ADA. The Plan determined that it would cost the County nearly $20 million (1992 dollars) to bring recreation and open space facilities into full compliance with ADA. Funding for handicapped access projects, primarily through Community Development funding, declined for the period 1995-2003 from the previous period by 41 percent, from $3,995,000 reported through 1994, to $2,255,493 expended from 1995 through 2003 in 119 projects. Yet, the PARD has been able to continue funding handicapped access projects through normal construction of new facilities and renovation of existing facilities that relies on Safe Neighborhood Parks Bond, Quality Neighborhood Initiative Bond Program, and Capital Outlay Reserve Fund allocations.

The 1995 EAR noted that four Natural Area Management Plans were developed for four coastal resource sites located within Miami-Dade parks. Additionally, capital funds were allocated for the preservation and/or restoration of coastal resources at various park sites. PARD reported that additional coastal access was provided by the acquisition in 1992 of the Charles Deering Estate, and additional capital projects provided further public access to coastal resources through construction or improvement of facilities such as wetslips, boat lanes, boat trailer parking spaces, and marinas on park sites. Funding for beach acquisition and preservation projects increased substantially during the 1995-2003 period over 1988-1994. Through 1994, $4,344,000 was spent increasing nearly eight-fold, to $31,424,245, for the period 1995-2003. There were 133 projects reported in the most recent period.

The number of projects for each measure was not tracked or available for prior to 1995.

The achievement analysis indicates that Miami-Dade County has achieved this objective. PARD and other County agencies have continued to expand access to parks and recreational facilities. Indications are that physical access to generalized park and recreational facilities has been provided at an acceptable level.

Since 2001 the County has been formulating a strategic plan under the title, "People's Vision, County's Mission." At a community-wide "Strategic Planning Event" held in June 2002, items/suggestions that had been elicited during several outreach sessions throughout the County

during the spring, attendees prioritized the suggestions. Of the few suggestions associated with accessibility, none had to do with the ability of residents to physically arrive at or enter parks and recreational facilities. Rather it was suggested that more activity-specific facilities be provided at more locations throughout the County. For instance a desire was expressed, at some of the local outreach sessions and in newspaper letters, that more "skateparks" for skateboarding be provided, noting that many of those pursuing the activity are younger residents who do not drive, and that distance is an obstacle. The suggestions selected at the community-wide event included: develop additional facilities throughout the County, including those for team and individual sports, skateboarding, pet parks, and small parks on available greenspace; and develop consistency in the quality of facilities throughout the County to ensure greater accessibility.

This objective may perhaps be available to be folded as policies within another objective(s).

Policy Relevance. The policies under Objective 3 were reviewed for continued relevance. The target dates in Objective 3 should be changed from 2000 to 2010. Inasmuch as the objective and the policies are largely concerned with capital projects, the policies under Objective 3 may be considered for inclusion under Objective 4.

Objective 4

The County shall maintain a capital financing plan to enable provision of park and recreation open spaces and facilities through a variety of public and private sources.

CDMP Monitoring Measure. The on-going implementation and status of biennial evaluations of the Park Impact Fee. The implementation status of any efforts to adjust the Park Impact Fee Schedule in response to changes in land costs, improvement credits and levels of service. The number of partnerships entered into between the County and community based organizations, special interest groups, and other outside agencies for facility improvements and recreational programs. The implementation status of strategies to: improve and expand the function of joint Park-School agreements; cooperative agreements entered into with homeowner associations or community groups for the provision and maintenance of recreation open space facilities, and; the creation of special taxing districts and/or alternative dedicated funding mechanisms for the provision and maintenance of recreation open space and facilities. The status of efforts to pass a general obligation bond issue for the implementation of priority recreation open space capital improvement projects. The number of interagency partnerships entered into between the Park and Recreation Department and other County agencies since 1995 that: 1) provide for landscaping maintenance and resource management in parks and natural areas through the use of regulatory fines collected by the Public Works Department and the Department of Environmental Regulation; 2) designate park sites as mitigation banks for environmental restoration; 3) restore natural areas through the investment of regulatory fines for environmental infractions; 4) improve physical access to recreational facilities and special events through public transportation programs; 5) support crime prevention in parks through the use of law enforcement and judicial assistance funds; 6) dedicate a portion of tourism development funds to support the maintenance, management, and improvement of park beaches and public attractions; 7) expand the use of youth and conservation service corps to assist with the repair and maintenance of parks, or; 8)

other similar initiatives. Completion of the Recreation Open Space Master Plan update by the 2000 target date.

Objective Achievement Analysis. The corresponding objective for the 1995 EAR was much less specific in terms of monitoring measures. It was reported that quantifiable monitoring measures were, again, not adequately described in the monitoring program, and in such absence, three indicators were used to track objective achievement. These included the implementation status of programs and strategies ensuring that private development addressed its impact on the LOS standard through provision of sufficient recreation open space facilities. Also, the number of, and funds expended for, the acquisition of significant natural, historic and/or archaeological resources; and the implementation status of programs and strategies coordinating with outside agencies and special interest groups to increase provision of recreation open spaces facilities and services.

Since 1995, PARD has been unable to update the Park Impact Fee biennially. The Impact Fee Ordinance is currently being updated with regard to current land costs, current improvement expenses, and modification to policies governing credits, exemptions, and collection areas. The modified fee schedule is expected to be completed for submission to the County Commission in 2003. Table 2.6-7 shows the amount of funding provided by the Park Impact Fee from implementation in 1990, to 1995 and from 1996 to January 2003. In the first period, over $5 million had been collected, and 2 sites acquired containing 95 acres of land. From 1996 through January 2003, more than $16 million had been collected, and 15 sites were purchased with impact fee money, out of 42 total sites acquired by PARD during the period. The amount of land contained in those 15 sites was 378 acres, or 42.8 percent of the 882 total acquired by the County.

Table 2.6-7
Park Impact Fee

	1994	2003
Funding	$5,086,000	$16,781,000
Number of Sites Acquired	2	15
Acres Acquired	95	378

Source: Park and Recreation Department, 2003.

In the1995 EAR, the success of this objective was measured by the funding provided to community-based organizations (CBOs) for the implementation of park improvement and other recreational programs. However, in 1996 the monitoring measure was modified to where the required data was no longer directly comparable to that in the previous EAR. The new data indicates that since 1996, the County entered into 455 partnerships with CBOs, and 44 partnerships with other agencies, for a total of 499 partnerships, to provide facility improvements and recreational programs, according to PARD data.

More than 100 agreements and dedicated funding mechanisms exist between PARD and the Miami-Dade Public School District, homeowner associations and other community groups, for the provision and maintenance of recreation open space and facilities, as shown in Table 2.6-8). There are 41 joint Park-School agreements in which the County and the School Board share recreation open space and facilities, and PARD reports another 9 agreements pending in 2003.

Another 14 agreements exist between the County and federal, State, County, and non-profit organizations to provide such services, 9 agreements are in place with homeowner associations and other community groups providing restaurants, utilities, and golf course operations, and 39 special taxing districts (STD) are in operation. An additional 30 STD's are pending. PARD attempts to maximize open space and minimize maintenance responsibilities through a variety of park/school agreements, interagency agreements and special taxing districts.

Table 2.6-8
Special Tax District and Park-School Agreements, 2003

Type Of Agreement	# of Agreements	Comments
Park/School	41	9 additional pending
Interagency	14	Federal, State, County, Non-Profit
Private	9	Restaurants, utilities, golf course operations
Special Taxing District	39	30 + pending
Total	103	39 + Pending

Source: Miami-Dade County Park and Recreation Department, Property Management Park/School Inventory, Interagency Agreement Inventory, Special Taxing District Inventory, February 2003.

In 1996, the County passed a $200 million general obligation bond for the purpose of acquiring, renovating and developing park and recreation areas and facilities countywide. Over $135 million was directly allocated for Miami-Dade Park and Recreation Department projects and an additional $15 million was allocated through challenge grants.

In 1999 the County approved the Quality Neighborhoods Improvement Program I that allocated $26,685,000 million for the purpose of park improvements. These improvements included but were not limited to the development, upgrade, renovation and replacement of athletic fields, courts, playgrounds, and recreation centers. The County approved another allocation of funding ($18,370.000) in 2002 to the Quality Neighborhoods Improvement Program II for continued park improvement projects.

At least 35 interagency partnerships between PARD and other County departments have been identified to exist (see Table 2.6-9). The largest number, 20, are interagency acquisitions. The second largest category is mitigation. PARD reports, however, that these mitigation partnerships do not function specifically as "mitigation banks" but more correctly are areas that are provided for offsite mitigation. In the table below, 1994 reflects the years from 1989 to 1994, and 2003 includes the years 1995 through January 2003. This was not a required monitoring measure in 1995 and no data exist as to the number of interagency partnerships in existence in the period 1989-1994.

Table 2.6-9
Interagency Partnerships

Type of Partnership	1995	2003
Interagency Acquisition	N/A	20
Other Interagency Mitigation	NA	2
In Parks	NA	10
Regulatory Fines	N/A	1
Transportation	N/A	1
Tourism	N/A	1
Total	N/A	35

Source: Park and Recreation Department, 2003.

There has been mixed success in fulfilling Objective 4. While some of the monitoring measures representing policies under the objective indicate that specific policies have been achieved, there are indications that other policies have not been achieved. Regarding policies of the objective, a pattern may be discerned that those that provide for cost-sharing were more successful while those that had the potential to shift costs from the public sector to the private sector were less successful. For instance, the Park Impact Fee has not been evaluated and efforts to adjust the Fee Schedule in response to changes in land costs, improvement credits and levels of service is only now being implemented, notwithstanding that the Fee has been effective in accumulating funds for recreation and open space acquisitions. Partnerships between the Park and Recreation Department and County agencies, other government agencies, and private or non-profit organizations for several purposes have generally increased. New taxing mechanisms and the bond issue have proven to be successful.

Overall, the analysis indicates that there has been progress in achieving Objective 4 since the 1995 EAR. This has been accomplished through maintenance of a capital financing plan that enables the provision of park and recreation open spaces and facilities. Furthermore, the objective has brought in private and non-profit organizations and other public agencies in a planned way to assist in that provision of parks, open spaces, and facilities. Cooperative efforts with some types of entities have so far shown more success than with others. Alternate financing – special taxing districts and the bond issue – has been successful but is neither widespread nor suitable for all areas of the County and dependent upon voters authorizing particular financing streams. Less progress is found in the completion of a new Recreation Open Space Master Plan, replacing the current document that dates from 1969. The PARD still seeks to implement a process with funding to update the Plan.

It is recommended that Objective 4 be retained in substantially the same form with no major changes.

Policy Relevance. The policies under Objective 4 were reviewed for continued relevance. Listed below are those policies requiring slight modifications or other changes.

Policy 4E. This policy has been substantially accomplished, with passage of the Safe Neighborhood Parks bond issue of 1996. Implementation, however, has been ongoing since that

time and continues, with another 30 percent of the bond proceeds still to be disbursed as of April 30, 2003. Policy implementation is therefore still relevant and modification of the policy would be warranted.

Policy 4F. Policy 4F addressed potential partnerships with other County agencies, such as the Public Works Department and the Department of Environmental Resources Management, and their willingness to expend funds for the enhancement of park and recreation programs. The vast majority of such partnerships have dealt with interagency acquisition, and almost all of the rest functioned as sites for offsite mitigation of environmental problems. This indicates that most of the partnering has been done with DERM, and also suggests that Policy 4F was developed without gauging the interest of other County agencies in participating in such partnership programs. The policy should be changed to reflect the partnerships with DERM or changed to direct a survey be conducted with other departments to indicate their willingness to enter into partnerships with the Park and Recreation Department.

Policy 4G. The policy calls for the Park and Recreation Department to update the 1969 Recreation Open Space Master Plan, by the year 2000. This has not yet been accomplished. The policy should be updated with a new deadline and planning period.

Objective 5

Maintain a formal capital improvements planning program that improves and expands the park and recreation system through the acquisition of land, the renovation and restoration of facilities and natural areas, and the development of new park and recreation open space and facilities.

CDMP Monitoring Measure. A comparison of capital expenditures since 1995 with the capital expenditure priorities set in Policy 5A. The number of recreation open space acres acquired by the County since 1995 through a combination of fee simple, shared fee, and non-fee simple methods. The implementation status of efforts to use a statistical analysis of LOS distribution to prioritize the acquisition of parkland. The number of park sites less than five acres in size and greater than 30 acres in size acquired by the County since the date of adoption. The total park acreage acquired through early site acquisition in areas planned for development inside the UDB in which heavy parcelization has occurred since the date of adoption. The number of conservation partnerships entered into between the County and land acquisition organizations specializing in the purchase of urban open space for recreational use since the date of adoption. A comparison of the parklands acquired by the County since the date of adoption with the acquisition priorities set in Policy 5B.vii. A comparison of capital expenditures for park repairs and upgrades since the date of adoption with the priorities set in Policy 5C. The number of projects and amount of funds expended for the following capital improvements since 1995: 1) repairs and projects increasing visitor safety; 2) hazard reduction; 3) facility upgrade and resource management; 4) accessibility improvements in compliance with ADA, and; 5) energy efficiency improvements. The number of new parks developed in recently established residential areas. The implementation status of strategies to reduce the number of undeveloped and underdeveloped park sites by the year 2005.

Objective Achievement Analysis. Policy 5A lists criteria that the County should follow in its capital improvement expenditures for parks and recreational facilities. The criteria include acquisition of local parkland to maintain the adopted LOS standard for local recreation open space by correcting existing deficiencies and addressing future needs, and acquisition of areawide parkland suitable for compatible outdoor recreation while preserving natural, historical, and cultural resources. A second criterion is to renovate, restore, and upgrade existing recreation open spaces and facilities, and a third is to develop new recreation open spaces and facilities within undeveloped or incomplete parks.

Table 2.6-10 lists expenditures by the above criteria. Over $273 million has been spent in capital improvement expenditures since 1995. More than $27 million has been spent during the period from 1995 to 2003 in acquiring 42 sites that contain 882.41 acres. Over $200 million has been spent on existing park development, including renovation, restoration, and upgrading of recreation open spaces and facilities. Development of new recreation open spaces and facilities within undeveloped or incomplete parks was undertaken through the expenditure of nearly $37 million.

Table 2.6-10
Capital Expenditures 1995-2003

Category	$	#	Acres
Land Acquisition	$27,500,000	42	882.41
Existing Park Dev.	$209,000,000	*	*
New Park Dev	$36, 900,000	*	*
Total	$273,400,000	N/A	N/A

Source: Miami Dade County Park and Recreation Department, Planning and Research Division Acquisition Database, February 2003. Miami Dade County Park and Recreation Department, Finance Division: Capital Improvement Work order System Report, February 2003.
Note: Amount dedicated to existing/new park development excludes funds expended in 2000.

The amount of parkland acquired through fee simple, shared fee, and non-fee simple methods has increased nearly eight-fold since 1995. According to PARD, 111 acres were acquired from 1984 through 1994. Since 1995, PARD has acquired 882.41 acres.

In response to the policy to utilize statistical analysis of LOS distribution to prioritize parkland acquisition, PARD developed a computer-based system to track development activity within emerging residential development. In doing so, PARD improved its ability to directly respond with new park and recreational facilities to recreational demands created by new development. The system first tracked all approved Development Impact Committee and Plat applications at the section level within the Unincorporated Municipal Services Area (UMSA). This allowed PARD to know in advance the type, quantity, and layout of proposed development. Second, a calculation of existing and required local parkland deficiency was completed using present and projected population, present and pending parkland and the required Level of Service for parks within specific geographic areas. This required the use of Geographic Information Systems (GIS) and statistical analysis to document not only the amount of land that was needed, but also the type of park (neighborhood, community, or district) that was most necessary for each area.

In terms of the size distribution of the 25 neighborhood and community parks acquired since 1995, 13, or just over half, have been five acres or less in size, as seen in Table 2.6-11. Five, or one-fifth, have been larger than 30 acres, and the remainder between 5 and 30 acres. By acreage,

however, most of the parkland acquired has been in parks greater than 30 acres in size (567 acres out of 699 total acres for parks in these classifications). Of parks 5 acres or less in size, nearly 36 acres were acquired, and 96 total acres were acquired for the 7 parks established that were of a size between 5 and 30 acres.

The average acreage for the breakdown has also been calculated. Of the parks that were 5 acres or less, the average size was 2.76 acres, 8.80 acres for parks greater than 5 acres, up to 10 acres, 17.50 acres for the 4 community parks between 10 and 30 acres, and 113.40 acres for the parks larger than 30 acres. Overall, reflecting the larger number of smaller-sized parks established, the average acreage was 27.97 acres.

PARD manages a Development Order Tracking System that geographically locates all new plats and maps them through Geographic Information Systems (GIS) capability. This allows acquisition efforts to identify areas within the UDB that are or will be most heavily developed or parcelized and programs suitable acquisitions. Some acquisitions are in the form of developer donations that offset projected recreational needs with publicly dedicated parkland. Other land acquisitions are through County-, State-, or Federally-owned surplus lands that are deemed suitable for local parks and are located in rapidly developing areas. Last are acquisitions through funding programs that allow for the purchase and dedication of neighborhood, community and district parklands needed to respond to ongoing residential development. Of the forty-two (42) properties that have been acquired since 1995 for all park categories, thirty-nine (39) have been identified as being within heavily parcelized areas deemed vulnerable to development. Without purchase, they would have been lost to residential development.

Table 2.6-11
Size Distribution of Neighborhood and Community Parks Acquired During 1995 - 2003

Local Park Type By Size	Number	Pct.	Acres	Pct.	Avg. Size
5 Acres or Less					
Neighborhood Park	8	32.0	26.19	3.7	3.27
Community Park	5	20.0	9.68	1.4	1.94
District Park	0	0.0	0	0.0	N/A
Total	13	52.0	35.87	5.1	2.76
10 Acres or Less / Greater than 5 Acres					
Neighborhood Parks	2	8.0	16.4	2.3	8.20
Community Parks	1	4.0	10	1.4	10.00
District Parks	0	0.0	0	0.0	N/A
Total	3	12.0	26.4	3.8	8.80
Greater than 10 Acres, and Less than 30 Acres					
Neighborhood Parks	0	0.0	0	0.0	N/A
Community Parks	4	16.0	70	10.0	17.50
District Parks	0	0.0	0	0.0	N/A
Total	4	16.0	70	10.0	17.50
Greater than 30 Acres					
Neighborhood Parks	0	0.0	0	0.0	N/A
Community Parks	2	8.0	160	22.9	80.00
District Parks	3	12.0	407	58.2	135.67
Total	5	20.0	567	81.1	113.40
Overall Total	25	100.0	699.27	100.0	27.97

Source: GIS Property Records, February 2003; Miami-Dade County Park and Recreation Department; Capital Improvement Work Order Report, Finance Division 1995-2002

Nine sites have been acquired in partnership with conservation organizations, including the Environmentally Endangered Lands (EEL) Program that is part of the Miami-Dade Department of Environmental Resources Management. The EEL Program has been partnered with for four sites, the Trust for Public Land, two sites, and one site each with the Everglades Community Association, the Florida Communities Trust that is a part of the Florida Department of Community Affairs, and the National Park Service.

Of the 42 sites acquired, nearly all, 40, and containing 100.28 acres or 88.6 percent of the total of 882.41 acres acquired, have been non-shoreline acquisitions, as seen in Table 2.6-12. Similarly, 39 sites, containing 784.53 acres, or 88.9 percent of the total acreage, have been compatible with outdoor recreation while only 3 were acquired for preservation purposes only. Again, 39 sites, containing 783.63 acres, or 88.8 percent of the total acreage, were acquired as multiple purpose sites and 3 as single purpose sites. Sites seen as otherwise vulnerable to development numbered 39, with 3 not in such danger. The vulnerable sites contained 875.94 acres, or 99.3 percent of the total acreage. Sites that were contiguous or linked to existing recreation open spaces numbered 20 and contained 174.24 acres, 19.7 percent of the acreage, while 22 were not contiguous or linked. Finally, 20 sites containing 656.02 acres, or 74.3 percent of the total acreage, were acquired with the cost shared between agencies, while 22 were acquired where the County alone bore the cost of acquisition.

Table 2.6-12
Type of Acquisition, 1995-2003

Acquisition Priorities	# of Sites	Acres	Percent
Shoreline	2	100.28	11.4
Non-Shoreline	40	782.13	88.6
Compatible with Outdoor Recreation	39	784.53	88.9
Preservation Only	3	97.88	11.1
Multi Purpose	39	783.63	88.8
Single Purpose	3	98.78	11.2
Vulnerable to Development	39	875.94	99.3
Non-Vulnerable	3	6.47	0.7
Contiguous	20	174.24	19.7
Non-Contiguous	22	708.17	80.3
Acquisition Cost Shared	20	656.02	74.3
Acquisition by County Only	22	226.39	25.7
Total	42	882.41	100.0

Source: Miami-Dade County Park and Recreation Department, Planning and Research Division, Property Management Files, Project Files, 2003.
Note: Total for all comparison pairs equals 42 sites, 882.41 acres, and 100 percent. In addition, of the 42 parks considered for meeting each criterion, different parks met different criteria, i.e. the 39 acquired parks that are compatible with outdoor recreation may not necessarily also be the same 39 parks that are multi -purpose or vulnerable to development.

No data or information could be reported regarding the number of projects and amount of funds expended for capital improvements since 1995 by type of project. The types of projects that information was desired were classified as:

- Repairs and projects increasing visitor safety
- Hazard reduction
- Facility upgrade and resource management
- Accessibility improvements in compliance with ADA standards
- Energy efficiency improvements

PARD reported that the agency did not classify expenditures in such a manner. However, staff responded that the department may discuss a way to implement a change in the work order system that may be able to provide some measure of this item for the next Evaluation and Appraisal Report.

Through the use of Impact Fee, Safe Neighborhood Park, Quality Neighborhood Improvement, Community and Economic Block Grants, and Capital Outlay Reserve funding, PARD was able to develop many previously undeveloped or underdeveloped parks. In 1995, almost 25 percent of both community and mini-parks, and almost 50 percent of neighborhood parks, were undeveloped or underdeveloped. In 2003, 30 of the 153 neighborhood, community, and district parks (19 percent) are considered underdeveloped or undeveloped. [Note: 119 mini-parks, the majority of which are either underdeveloped or undeveloped, are transitioning to Town of Miami-Lakes control due to its formation as a municipality in 2001/2002 and are not included in the PARD inventory.]

The wide breadth of the monitoring measures is an ambitious effort to track how well PARD's capital budgets actually improved and expanded the park and recreation system. The monitoring measures related to Objectives 4 (finance) and 5 (expenditures) are in certain ways reflective and detail alternate means by which parks and recreational facilities and services may be provided. And as with the former, progress is seen in the achievement of Objective 5 and its policies, as the monitoring measures generally demonstrate.

The monitoring measure detailing projects and expenditures in accord with Policy 5C, however, have caused some problems. PARD reports that departmental work orders do not have coding that permit the compilation of data anticipated by the monitoring measure, nor do projects typically fulfill only one purpose. PARD staff suggest, as a result, that Policy 5C exist as a policy statement with intrinsic expectation that projects will be of a multipurpose nature.

Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained.

Objective 6

Maintain and continue to implement the comprehensive resource management program for the acquisition and site-specific management of environmentally sensitive lands, coastal areas and historic sites within Dade County parks.

CDMP Monitoring Measure. The percentage of natural resource areas located in Dade County parks for which comprehensive resource management plans have been developed. The number of comprehensive resource management programs that have been developed for designated natural resource areas in Dade County parks since 1995.

Objective Achievement Analysis. At the time of the 1995 EAR, PARD reported maintaining an inventory of 63 parks with natural resource sites. A Natural Areas Management Section had been established to implement natural area management plans, which had been developed for 20 sites, in conjunction with the Conservation Partnership.

Between 1995 and 2002, PARD merged 10 of the previously inventoried natural areas into adjacent park property, reducing the total number of natural resource areas to 53. Thirteen of the 53 areas are listed as individual Natural Area Preserves, with the remaining 40 "natural areas" contained within existing parks. Comprehensive Resource Management Plans (CRMP) have been developed for six of the natural area sites. The CRMP is an all-encompassing plan for management of an area. Natural Areas Protection Plans (NAPP), have been prepared for 12 of the areas. The NAPPs are biological and ecological task specific plans which may change annually.

Historic sites are managed by individual Park Managers as part of PARD's total recreational system. Historic resources are protected by ongoing maintenance, review of projects by historic preservation specialists, and the requirement that capital projects receive approval through a "Certificate of Appropriateness." Historic sites typically include large pre-1950 parks with historic structures and landscapes that made up many passive parks built in the early days of the parks system.

Analysis of the monitoring measures is difficult. PARD has shown progress in the continuing operation of the Natural Areas Management Division. As a result of internal County transfers that did not result in the loss of protected natural lands, the number of natural area sites under PARD control has shown a paper decline from 63 to53. The number of NAPPs has declined to 12 from the 20 that existed in 1994, but there are now 6 CRMPs. Monitoring measures did not adequately encompass all of the types of parks included in the objective, such as historic sites.

It is recommended that the objective be retained and perhaps strengthened along with a change in wording to more accurately convey the meaning of the objective. It currently seems to attempt to call for congruent aims with too few words; a suggested change would be to separate acquisition from site-specific management. The objective's language could also be changed to anticipate that programs sometimes do migrate within and among County departments, e.g. some natural areas moving from PARD management to EEL/DERM stewardship.

Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained.

Objective 7

Maintain and improve communications between Park providers and visitors to ensure that the population's expressed needs and desires provide direction in the further development and operation of the park system.

CDMP Monitoring Measure. The completion of an updated leisure interest survey by the 2000 target date. The implementation status of strategies to maintain and increase public participation in park planning, construction, and operational issues, and to increase the public's awareness of recreational opportunities.

Objective Achievement Analysis. The corresponding objective's policies evaluated in 1995 pointed PARD in the direction of a marketing orientation, based upon the population's needs and desires, used to provide direction for the further development and operation of the park system. As such, the monitoring measures were to analyze how PARD utilized marketing studies, involved the public in the decision-making process for recreation open space acquisition, development, and operation, and how well PARD promoted the use of County recreational facilities.

A Park and Recreation Citizen Advisory Committee that was created pursuant to Ordinance No. 94-115 in 1994, and noted in the 1995 EAR, has continued to provide non-binding recommendations to PARD and the Board of County Commissioners. In addition, PARD reports that a Leisure Interest Survey was conducted in 1998. Public participation in park planning, construction, and operational issues, and to increase the public's awareness of recreational opportunities in the County, has been accomplished in several ways. These include the PARD website, available independently http://www.co.miami-dade.fl.us/parks/ or through the County web portal http://miamidade.gov/; PARD staff presence at unincorporated area Community Council non-zoning meetings; participation by PARD staff in the County's Strategic Planning process; groundbreaking and ribbon cutting ceremonies; a calendar of events and PARD newsletters; the County's television station; and by other means as appropriate.

Evaluation of the monitoring measures indicates that the objective has been achieved. The measures show that PARD is using traditional as well as new and innovative methods and technologies in providing and soliciting information and viewpoints. Upon further analysis, PARD is seen as responsive to community needs, subject to constraints placed upon the County and the department. These constraints include financial as well as lags that are to be expected in the design and development/construction phases of public projects. Recommendation is made that the objective remains unchanged.

Policy Relevance. All of the policies under this objective are directive in nature and continue to be relevant. Therefore, the policies of this objective will be retained.

2.7 COASTAL MANAGEMENT ELEMENT

Upon adoption of the 1995 Evaluation and Appraisal Report (EAR), the Coastal Management Element was revised and reorganized to better reflect the Element's two main factors; the natural environment and the built environment. As a result of the EAR-based amendments, adopted on October 10, 1996, new objectives were added to the Element and the Port of Miami Subelement was transferred to the Transportation Element.

Objective 1

Protect, conserve and enhance coastal wetlands and living marine resources in Miami-Dade County.

CDMP Monitoring Measures. The monitoring measure program for this Objective will be to report the net change in coastal wetland area within Miami-Dade County.

Objective Achievement Analysis. An approximate acreage figure for the change in coastal wetlands in Miami-Dade County was compiled by the Department of Environmental Resources Management through the Class I Permit files. A Summary of findings is included in Table 2.7-1.

Table 2.7-1
Permitted Coastal Wetlands Impacts and Mitigation 1995-2002

PROJECT NAME	PERMIT NUMBER	ACRES IMPACTED	ACRES CREATED OR DONATED	NET ACRES CREATED
Shoma Devel.	CC87-166	64.80	38.89 created 72.56 donated	-25.91
FIU	CC95-056	00.12	00.00*	-00.12
Cape Fla. State Rec. Area	CC95-260	**	75.00	75.00
Baywood Park	CC95-283	N/A	00.05	00.05
Deering Estate	CC96-034	N/A	03.70	03.70
Va. Key Outfall	CC96-238	0.003	0.007	0.004
Oleta River	CC96-282	**	29.00	29.00
Everglades Mitigation Bank	CC96-303	Mitigation Bank – Creation Figures Not Available		
Va. Key	CC96-303	**	03.00	03.00
Old S. Dade Landfill	CC97-040	25.25	39.50	14.25
NE 213 St. Construct	CC97-231	00.59	01.02	00.43
Marina Bay Club	CC97-281	00.25	00.69	00.44
RK Associates	CC98-032	00.88	01.25	00.37
Intracoastal Yacht Club Apt	CC98-151	00.38	00.00created 04.08 ***	-00.38
Lefmark	CC98-404	00.44	****	-00.44
Suttonwood	CC02-030	00.04	00.13	00.09
Totals		92.753	192.237	99.484

Source: Department of Environmental Resources Management, Coastal Resources Section, 2003
* Mitigation involved removal of exotics only
** Impact other than wetlands.
*** Wetlands Enhancement
**** Credit to FPL Mitigation Bank

Table 2.7-1 shows that 16 Class I Coastal Wetlands permits were issued between 1995 and 2002. The summary of net acres indicates that approximately 100 acres of coastal wetlands were created since 1995. This does not include 72 acres of wetlands, which were donated to Biscayne Everglades National Park, enhanced wetlands, monetary contributions to the FPL Mitigation Bank, or wetlands created in the Everglades Mitigation Bank in South Miami Dade County.

Based upon the data contained in Table 2.7-1 it can be concluded that the gains have outweighed the losses and that Objective 1 was achieved.

Policy Relevance. Policy 1A should be updated to include new and additional mangrove wetland areas and the wording should be clarified. Policy 1G should be updated to include additional wetland areas, which prohibit dredging and filling activities. The word "program" will be deleted from the monitoring measures. All other policies continue to be relevant and should be retained.

Objective 2

Protect, conserve or enhance beaches and dunes and offshore reef communities.

CDMP Monitoring Measures. The monitoring measure for this Objective will be to report area of restored beaches, expanded dune system and artificial reef sites, and the number of designated environmental protection areas.

Objective Achievement Analysis. The Miami-Dade County Department of Environmental Resources Management (DERM) has increased its beach restoration and renourishment programs since Hurricane Andrew in 1992. Between 1995 and 2002, three areas of Miami-Dade County have been targeted by these restoration efforts, including Key Biscayne, Sunny Isles and beach areas between Government Cut and Haulover. Table 2.7-2 shows the areas, which have been restored in the last 7 years. In addition to beach restoration, DERM has, since 1996, renourished approximately 160 acres of beach at a cost of over $37 million and created or restored 86.3 acres of dune systems.

Table 2.7-2
Beach Restoration 1995-2002

Area	Restoration (Acres)
Sunny Isles Beach	369.1
Key Biscayne	63.6
Gov't. Cut to Haulover Park	32.0
Total	464.7

Source: Miami-Dade County Department of Environmental Resources Management, Coastal Resources Section, 2003

Between 1995 and 2002, DERM has permitted 8,100.7 acres of artificial reef for construction. These large areas contain numerous individual artificial reefs, but the actual area of "reef" is only a small percentage of the total sea bottom permitted. Table VII-3 details the number of reef sites and acreage.

Table 2.7-3
Artificial Reefs 1995-2002

Area	Number of Artificial Reef Sites	Permitted Acreage
Biscayne Bay Sites	7	135.1
Offshore Sites	13	7,965.6
Total	20	8,100.7

Source: Miami-Dade County Department of Environmental Resources Management, Coastal Resources Section, 2003

Currently the only designated environmental protection area related to beaches and artificial reefs is the Key Biscayne Special Management Zone artificial reef site. The Special Management Zone was designated in 1991 and contains 2,203.5 acres. No new protection areas have since been designated.

Based upon the data in Tables 2.7-2 and 2.7-3, Objective 2 has been achieved.

Policy Relevance. All policies continue to be relevant and should be retained.

Objective 3

By 2005, Miami-Dade County shall reduce the number of exceedances of water quality standards for coastal and estuarine waters by 25 percent.

CDMP Monitoring Measures. The monitoring measure for this Objective will be that Dade County, in cooperation with State and federal agencies, will develop water quality antidegradation targets by 2000. A second measure will be the number of pollution exceedances of water quality standards.

Objective Achievement Analysis. Miami-Dade County Department of Environmental Resources Management (DERM) is working in cooperation with the Florida Department of Environmental Protection to establish antidegradation targets. Although a significant amount of progress has been made since 1995, it is anticipated to be several years before standards are promulgated. Until these targets are developed, the secondary measure of water quality exceedances will be utilized.

The Biscayne Bay Surface Water Quality Monitoring Program was established in 1979 to monitor changes in water quality throughout the bay. This monthly program has been instrumental in identifying sources and causes of water quality degradation. The program involves surface waters sampling at 103 stations throughout Biscayne Bay and it's watershed tributaries as illustrated in Figure 2.4-2 of the Conservation Aquifer Recharge and Drainage Element. Analytical results obtained between 1995 and 2001, indicate that 10.94% of over 116,000 laboratory analytical results did not meet either State or County standards; however few of these violations were observed in open Bay waters. Data appears to indicate that the quality of surface water within Biscayne Bay has steadily improved. This is largely due to several initiatives taken since 1995.

In 1995 the South Florida Water Management District published an update of the Biscayne Bay Surface Water Improvement Management Plan (SWIM). This document updated data used to identify problems facing the bay and evaluate the strategies for improvement undertaken to date. Additionally, this plan identified approximately 30 million dollars of projects designed to enhance the quality of Biscayne Bay. Among these projects was the initiation of the South Dade Stormwater Treatment and Distribution Area Demonstration Project (SDTA), an 80-acre area constructed to test the effectiveness of using a natural wetland system to provide temporary water storage from an adjoining canal system and improve stormwater runoff water quality for surface waters discharging to Biscayne Bay.

Upon expiration of the SWIM legislation and due to the importance of Biscayne Bay as an Outstanding Florida Water, the Florida Legislature, in 1999, created the Biscayne Bay Partnership Initiative (BBPI); a community-based forum tasked with providing recommendations for actions to protect, improve and enhance Biscayne Bay. In 2001, the BBPI released a series of reports by its committees and team members entitled Survey Team Final Reports, one of which addressed "Water and Sediment Quality". This report states that the most notable water quality exceedances between 1995 and 1999 involved coliform, ammonia, phosphorus, and nitrate/nitrite. In each case the report shows that the open waters of Biscayne Bay rarely exceed standards and that most exceedances occur in the canals and tributaries.

The SWIM and the BBPI have spawned many programs and projects designed to enhance Biscayne Bay. Additionally, Miami-Dade County, in an effort to preserve the environmental, economic and community values of Biscayne National Park, authorized the South Miami-Dade Watershed Study and Plan, a 3.5 million dollar initiative that will begin in 2003.

Water quality data obtained through the BBPI and the Biscayne Bay Surface Water Quality Monitoring Program, indicate that the quality of the Bay waters remains high and therefore this objective has been partially achieved. However, quality of the discharge waters remains suspect. The impacts of the numerous programs aimed at reducing pollutant loadings into Biscayne Bay should be realized by the next Evaluation and Appraisal Report period.

Policy Relevance. The intent of the objective will be retained but should be rephrased to reflect continued improvement in water quality and not be year or percent specific. Antidegradation targets are continuing to be developed, therefore, the date of completion as listed in the monitoring measure should be modified to reflect a new completion date. Similarly, Policy 3C should be rephrased to continue the prioritization and improvements to all damaged stormwater outfalls. The quantity of 50 gallons of hazardous or industrial waste as stated in Policy 3H should be revised to 55 gallons. The wording in Policies 3I and 3J should be revised so as not to be year specific, but reflect continued compliance with the policy intent. The 2000 year in Policy 3P and the monitoring measure should be revised to reflect a target year for completion of the antidegradation criteria. All other policies continue to be relevant and should be retained.

Objective 4

Miami-Dade County shall increase the acreage of benthic, coastal wetland and coastal hammock habitat that is publicly owned by 100 acres by the year 2000. Endangered and threatened animal species shall be protected and coastal habitats restored and managed to improve wildlife values.

CDMP Monitoring Measures. The monitoring measure for this new Objective that focuses on wildlife will be the number of initiated wildlife and habitat studies and significant actions to implement regulations to protect coastal wildlife and habitat.

Objective Achievement Analysis. Miami-Dade County has actively participated in the acquisition and management of environmentally sensitive coastal lands, and the preservation of threatened and endangered species. Programs managed by DERM and Parks and Recreation (PARD) include acquisition, education and management components.

Since 1995, over $31 million has been appropriated by Miami-Dade County for acquisition of beaches and environmental preserves. The Environmentally Endangered Lands Program (EEL), managed through DERM, has obtained approximately 600 acres of coastal wetlands since 1995 with an acquisition cost of $5,409,241 and a management cost of $280,453. Additionally, PARD acquired 81.28 acres of land at Haulover Park and 19 acres of land at Lakes by the Bay totaling 100.8 acres of additional coastal parkland.

Manatee and sea turtle programs have been established to preserve the coastal habitat and increase the population. The Sea Turtle Program, administered by Parks and Recreation, is funded every year to monitor turtle activities, relocate nests to hatcheries, care for sick and injured turtles, conduct an educational program and release hatchlings to the ocean. Turtles of particular concern include the Leatherback, Green and Loggerhead turtles. Since 1995 this program has released approximately 191,500 turtle hatchlings to the ocean.

Due to the mobility of the manatee, population statistics are not reliable. Miami-Dade County has contributed in excess of $400,000 to manatee protection efforts since 1995. These funds, generated through boat registration fees, have been spent on manatee education, signage and enforcement.

Based on the above data, the above objective has been achieved.

Policy Relevance. The Objective should be reworded so as not to be year specific. The monitoring measure should not be referred to as "new". Policy 4D, will be reworded to encourage a stronger role in the removal of coastal exotics, and seek funding for this effort which have become a major problem. All other policies continue to be relevant and will be retained.

Objective 5

Increase the amount of shoreline devoted to water-dependent, water-related, and publicly accessible uses in Miami-Dade County by 2000.

CDMP Monitoring Measure. The monitoring measure for this Objective will be to report significant changes in the amount of shoreline devoted to water-dependent, water-related, and publicly accessible uses.

Objective Achievement Analysis. The Shoreline Development Review Committee is responsible for directing shoreline projects including bayside residential projects larger than single-family and duplex size, and certain commercial projects, to include access facilities such as pedestrian walkways, viewing areas, and boat docking facilities. Since 1995, this Committee has reviewed 98 shoreline projects, more than double the 41 applications reviewed between 1988 and 1994. They types of projects reviewed by this committee are categorized in Table 2.7-4.

Table 2.7-4
Shoreline Review Project Types

	Years								
Category	1995	1996	1997	1998	1999	2000	2001	2002	Total
Residential	5	5	7	9	2	7	9	14	58
Hotel	-	1	-	1	-	-	2	-	4
Marina/Port	-	-	1*	2	-	2	-	1	6
School	-	-	-	-	-	-	-	1	1
Commercial	2	2	5	1	-	3	3	1	17
Deck/Dock/Repairs	-	2	-	-	-	-	-	-	2
Governmental	-	-	-	1	-	-	-	-	1
Recreation/Attraction**			1	1	1	1	4	1	9
Total	7	10	14	15	3	13	18	18	98

Source: Shoreline Review Committee, 2003

* Represent a former marina use converted to office.

** Uses include American Airlines Arena, Watersport Center, Visitor and Aviation Center, Watson Island and Bear Cut Nature Preserve.

Based upon Table 2.7-4, water dependent/water related uses, including marinas, docks, waterside parks and recreational uses and attractions accounted for approximately 16% of the applications. Although not considered water related or water dependent, governmental, hotel and commercial uses, which account for 22% of the applications, enhance the economy and afford public accessibility to the bay for millions of people who visit the Miami-Dade County shores every year. Multifamily residential units and other non-water related uses account for over 61% of all applications reviewed by the Shoreline Review Committee. Many applicants provide public access to the water, or enhancement of a nearby public access point, as mitigation for setback encroachments. However, there is currently no process method to address non-compliance of this provision. In only one instance in the previous seven years was a water dependent use converted to a non-water dependent use with approval by the Board of County Commissioners. This occurred in 1997 when a failed boat storage facility was converted to an office.

Additional shoreline access has been achieved through the Environmentally Endangered Lands Program (EEL), which has obtained 600 acres of coastal wetlands since 1994. Management plans implemented for these acquired sites include public education programs, which allows the public to tour the parks, utilize recreational opportunities, and learn about these unique habitats. Similar educational programs are available through the Biscayne National Park and Everglades National Park, both of which are coastally located.

Based upon all available data, it appears that Objective 5 was achieved. The amount of public access through the EEL and park programs has been significantly increased. Additionally, public access to the shoreline has been increased through reviews and comments made by the Shoreline Review Committee. However, the shoreline ordinance should be reviewed and modified to provide a process method for achieving compliance.

Policy Relevance. The Objective should be revised so as not to be year specific. Policy 5D should be expanded to recommend that compliance processes for required mitigation be developed by the Shoreline Development Review Committee. All other policies continue to be relevant and should be retained.

Objective 6

Miami-Dade County shall preserve traditional shoreline uses and minimize user conflicts and impacts of man-made structures and activities on coastal resources.

CDMP Monitoring Measure. The monitoring measure for this Objective will be to report significant changes in traditional shoreline uses, user conflicts, and construction impacts.

Objective Achievement Analysis. Development including residential structures larger units then single family or duplex units constructed along the coastline is subject to review by the Shoreline Development Review Committee, which, as discussed in Objective 5, is responsible for the enhancement of public access facilities such as pedestrian walkways, viewing areas, and boat docking facilities. However, all projects, including repairs and replacements, that extend into the water also require a Class I Coastal Construction Permit by the Miami-Dade County Department of Environmental Resources (DERM). Therefore projects that are issued a Class I permit are not required to be reviewed by the Shoreline Development Review Committee unless they are a large scale project. Prior to issuance of the class I permit, staff works with the applicant to reduce the negative impacts on coastal resources, including conflict between potential users. These extensive pre-permitting efforts have resulted in mitigation requirements for less than 15% of the Class I Coastal Construction projects. Projects with impacts, which cannot be mitigated, are either denied or permitted with a condition requiring mitigation along another portion of the coast. Table 2.7-5 summarizes the number of Class 1 Coastal Construction Permits allowed each year.

The review processes provided by both the Shoreline Review Committee and DERM ensure that approved projects provide public access with minimal conflicts to coastal resources. Therefore Objective 6 has been achieved.

Policy Relevance: A new date for funding should be provided for Policy 6A. All other policies continue to be relevant and should be retained.

Table 2.7-5
Coastal Construction Permits 1995-2002

Year	Class I Coastal Construction Permits Issued	Number of Permits Requiring Mitigation	Percent Requiring Mitigation
1995	184	13	7.06
1996	220	21	9.55
1997	195	32	16.16
1998	242	32	13.22
1999	263	41	15.59
2000	277	40	14.44
2001	270	41	15.19
2002	263	47	17.87
Total	1,914	267	13.95

Source: Miami-Dade County Department of Environmental Resources, Coastal Resources Section, 2003

Objective 7

Improve the public's awareness and appreciation of Miami-Dade County's coastal resources and water-dependent and water-related uses.

CDMP Monitoring Measures. The monitoring measure for this Objective will be to report significant changes to programs, which provide public awareness through park and school programs, special events, or the print and electronic media.

Objective Achievement Analysis. The Department of Environmental Resources Management (DERM) and the Parks and Recreation Department (PARD) each have programs devoted to increasing the public's awareness towards coastal resources. Between 1999 and 2002, DERM has given over 80 presentations to approximately 7,000 students, held 15 special events with approximately 4,700 participants and distributed information at events attended by over 10,000 persons. These programs are designed to educate the public about the aquatic and terrestrial resources in the county. Miami-Dade County produced a TV series called "Down to Earth" in both English and Spanish to address major environmental issues including: marine resources, water, and Biscayne Bay. Additionally in 2001 and 2002, DERM sponsored 16 tree adoption events in which approximately 26,000 trees were distributed.

Miami-Dade County annually sponsors Baynanza, a springtime event designed to heighten public awareness towards Biscayne Bay and the aquatic environment. This event is one to two weeks in duration and reaches thousands of people annually. Miami-Dade County has spent over $566,000 for the Baynanza events since 1995, which include Bay Clean-up day, Little Havana Earth Day, River Day, photo contests and other environmentally related events.

In 1999, PARD began its Eco-tourism Program, which provides aquatic and terrestrial tours, naturalist interpretation and lectures from one of 6 Miami-Dade County Parks. This program was budgeted for approximately $100,000 in 2002 to promote public awareness.

Based on the extent and diversity of programs identified above, this objective has been achieved.

Policy Relevance. All policies continue to be relevant and should be retained.

Objective 8

The existing time period required to complete the evacuation of people from flood vulnerable Coastal Areas and mobile homes prior to the arrival of sustained tropical storm force winds shall be maintained or lowered by 2000. Shelter capacity within Miami-Dade County shall be increased by 25 percent by 2000.

CDMP Monitoring Measures. The monitoring measure for this Objective will be to report estimated change in aggregate evacuation time and public shelter capacity within Miami-Dade County.

Objective Achievement Analysis. Between 1995 and 2001, Miami-Dade County was divided into three hurricane evacuation zones, Coastal High Hazard Area (CHHA), Hurricane Vulnerability Area (HVA) and Hurricane Categories 4 and 5. These evacuation zones were tied directly to hurricane categories. The CHHA is defined as the evacuation area from a Category 1 Hurricane. The HVA includes the CHHA and adds the area impacted by a Category 2 and 3 Hurricane. Zone 4 and 5 encompasses all area in the CHHA and HVA zones and adds the area impacted by a Category 4 or 5 Hurricane. In 2002, the Miami-Dade County Office of Emergency Management (OEM) reevaluated the hurricane evacuation zones utilizing new population estimates and storm surge data and developed a new Hurricane Evacuation Zone Map as illustrated in Figure 2.7-1. The new hurricane evacuation zones, designated Zones A, B, and C, reflect a reduced storm surge impact area, thus reducing the number of potential evacuees during a hurricane. Table 2.7-6 shows the population estimates as they relate to the new and previous evacuation zones.

As shown in Table 2.7-6 the population estimates required to evacuate a given zone have been reduced by approximately 45%. Zone A, which correlates to the previous CHHA (Category 1 hurricane) evacuation zone, remains unchanged. Area and population estimates for all other evacuation zones have been significantly reduced. New evacuation times will be modeled using assumptions, which reduces the number of persons required to evacuate.

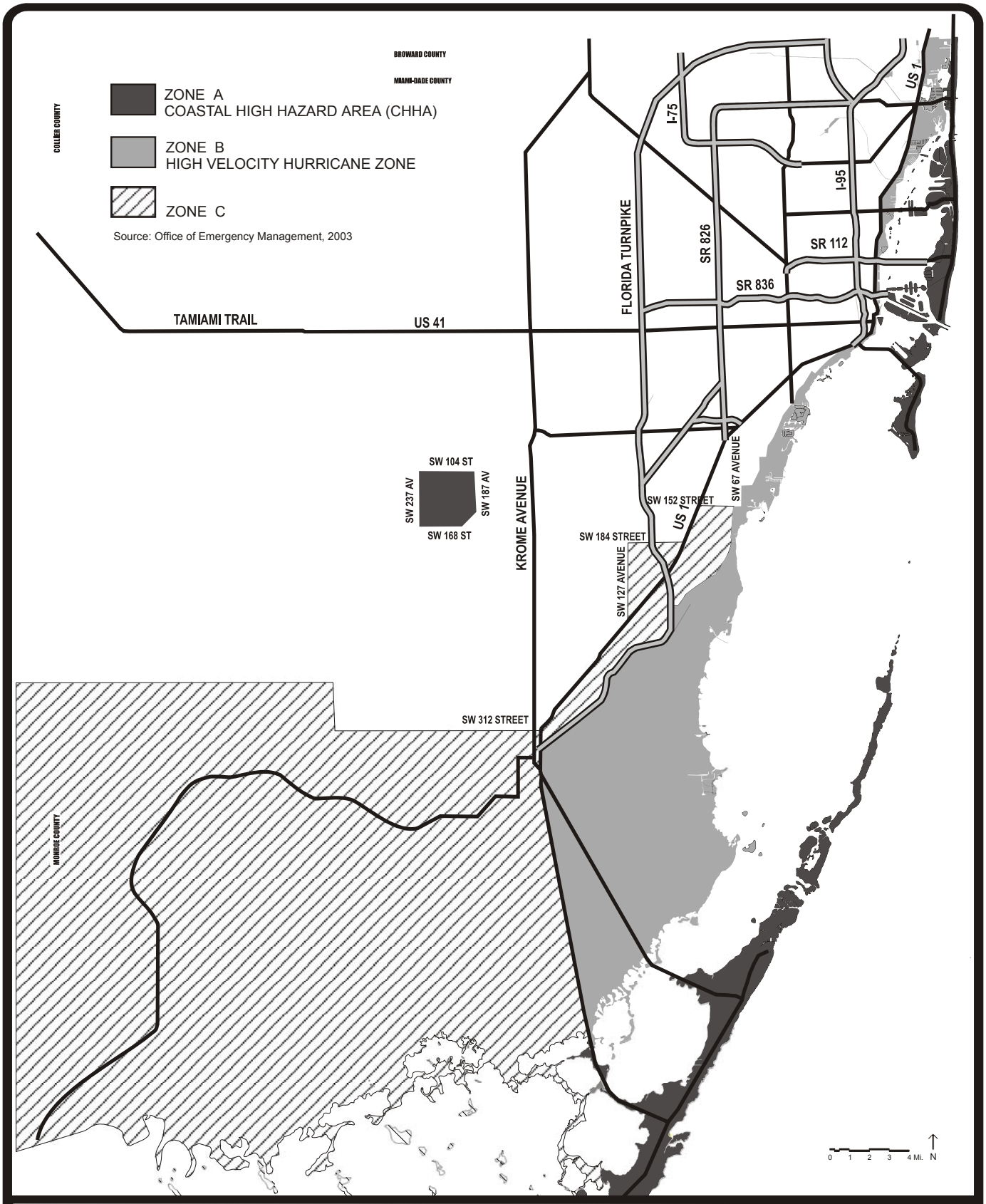


Figure 2.7-1

2003 HURRICANE EVACUATION ZONES

DEPARTMENT OF PLANNING AND ZONING

2003EARale

Table 2.7-6
Population Evacuation Estimates

New Hurricane Evacuation Zone Designations	Previous Hurricane Evacuation Zone Designation	New Population Estimates		Previous Population Estimate	
		Per Zone	Cumulative	Per Zone	Cumulative
Zone A	CHHA Category 1	134,460	134,460	134,460	134,460
Zone B	HVA Category 1- 3	127,215	261,675	185,726	320,186
Zone C	Category 4&5 Category 1 - 5	136,376	398,051	401,302	721,488

Source: Miami-Dade County Office of Emergency Management, 2003

Evacuation zones A, B, and C, have been coordinated with Broward and Monroe Counties and are color coded to facilitate the hurricane evacuation warning systems in the three counties. Zones A, B, and C correlate to the CHHA, HVA, and Category 4 and 5, respectively, with the exception of an 8 1/2 square mile area located in the western portion of the County. This area was added to Zone A due to the inability of rescue workers to access this low lying area during a hurricane. Additionally, the new zones were designated so that they are not Hurricane Category specific giving OEM the flexibility to evacuate the appropriate zones based upon the anticipated impact of the storm. For example, if a Category 3 Hurricane approaches Miami-Dade County from the west and produces a storm surge which will impact only Zone A, OEM can announce an evacuation of Zone A without confusion to persons in other zones.

The change in Hurricane Evacuation Zones has directly impacts the potential number of persons who may require shelter during a storm event. In the late 1990s Miami-Dade County adopted a strategy encouraging people to seek safety but not to leave the county during a hurricane. Public buildings are incorporating hurricane mitigation measures including safe rooms and hurricane shutters to reduce the distance that people need to travel to reach a safe haven. The Red Cross estimates that approximately 23% of people notified to evacuate during a storm will go to a shelter. Most stay in their homes or go to dwellings outside of the evacuation zone. Currently, the total shelter capacity in Miami-Dade County is 66,398. This figure, representing a shelter capacity increase of 64% from 1994, does not include approximately 3,000 spaces reserved for special needs persons or 400 hospital spaces reserved for injured.

Although the shelter capacity has increased significantly since 1995, it is insufficient to shelter all potential evacuees. This capacity is sufficient, based upon a 23% user rate, as estimated by the Red Cross, for evacuation of Zones A and B, however, a deficiency would be realized should all zones be evacuated.

The new philosophy of Miami-Dade County to reduce the number of evacuees and distance traveled will also significantly impact the clearance time associated with a major storm event. According to the Comprehensive Emergency Management Plan (CEMP) produced by the Office of Emergency Management and last updated in 2003, the modeled clearance time for evacuation of the barrier islands is approximately 13 hours (Category 1 Storm) as indicated in Table 2.7-7. This time has been reduced from the 17 hours reported in the 1995 EAR. These vehicle clearance times as presented in Table 2.7-7 are based on data and models available as of December 2002 and therefore do not reflect the new evacuation zones. New models, anticipated

in June 2003, will reflect the latest population estimates and new hurricane zones. Based on the lower population estimates associated with the new evacuation zones, vehicle counts and clearance times for the new hurricane zones will likely be further reduced. Amendments to the CDMP will include the most updated information regarding vehicle clearance times from various zones.

Table 2.7-7
Vehicle Clearance Times by Zone

Hurricane Evacuation Zones	Correlating Hurricane Intensity	Estimated Vehicles by zone (July)	Cumulative Vehicles (July)	Estimated Vehicles by Zone (November)	Cumulative Vehicles (November)	Estimated Clearance Time (Hrs)
Coastal High Hazard Area	Category 1	104,488	104,488	134,942	134,942	13
Hurricane Vulnerability Area	Category 1-3	86,087	190,575	104,866	239,808	13.5
Coastal Zones 1-5	Category 1-5	114,645	286,091	132,042	347,806	26-28

Office of Emergency Management; Comprehensive Emergency Management Plan, 2003

Modeling upon which Table 2.7-7 was developed does not assume more than one trip per vehicle, and therefore may not accurately predict the clearance times during a storm. Since a family may make many trips prior to an evacuation (i.e. work to home, work to school to home, etc.), an accurate clearance time is difficult to predict. Additionally, no data is available regarding actual vehicle clearance times during a storm. Given the lack of manpower during a hurricane, no effort has been made to collect real time data.

Objective 8 has been achieved, based upon the lowering of modeled evacuation times and the percent increase in shelter capacity from 1994.

Policy Relevance. Objective 8 and Policy 8K should be reworded so as not to be year or percentage specific. Policy 8A should be reworded to identify the hurricane evacuation procedures section of the Comprehensive Emergency Management Plan. The monitoring measure referring to clearance times may not reflect actual conditions and should be clarified. All other policies continue to be relevant and will be retained.

Objective 9

By 2000, Miami-Dade County shall orient its planning, regulatory, and service programs to direct future population concentrations away from the Coastal High Hazard Area (CHHA) and FEMA "V" Zone. Infrastructure shall be available to serve the existing development and redevelopment proposed in the Land Use Element and population in the CHHA, but shall not be built, expanded, or oversized to promote increased population in the coastal high risk area.

CDMP Monitoring Measures. The monitoring measure for this Objective will be to report land use plan amendments, population change, and infrastructure improvements in the CHHA.

Objective Achievement Analysis. Currently only four areas of unincorporated Miami-Dade County lie within the CHHA: A portion of Key Biscayne, a portion of Virginia Key, Haulover Park in Sunny Isles and Fisher Island. The remaining areas in the CHHA are located within 11

municipal boundaries and will not be addressed. Between 1995 and 2002 no new infrastructure or expansion of infrastructure that would promote increased population growth took place within the CHHA of unincorporated Miami-Dade County. Miami-Dade County did repair roadways and bridges leading to the barrier islands, however, these were maintenance items and not expansions. The Virginia Key wastewater treatment plant has had capacity expansions and improvements since 1995, however, these activities are necessary to keep pace with the growing population of Miami-Dade County and do not encourage additional population in the CHHA.

The lack of infrastructure expansion to roadways in the CHHA is consistent with the state law limiting public subsidy for infrastructure in the CHHA other than to meet the needs of the existing population. As previously indicated, all land located in the CHHA, with the exceptions of Virginia Key, Key Biscayne, Haulover Park in Sunny Isles and Fisher Island, are under the jurisdiction of municipal governments, eleven in total. Most public buildings owned or leased by Miami-Dade County are located within the unincorporated area, including those within the coastal area. Table 2.7-8 indicates all the owned or leased properties in the CHHA zone.

Table 2.7-8
Miami-Dade County Owned or Leased Buildings in the CHHA

Description	Location	Building Size (Sq. Ft)	Leased By/Owned
Crandon Park	7200 Crandon Blvd.	234,711	GSA-Parks & Recreation
Crandon Park	6702 Crandon Blvd.	3,768	GSA-Parks & Recreation
Haulover Park	13700 Collins Avenue	36,911	GSA-Parks & Recreation
Public Works	13401 Collins Avenue	4,020	Owned
GSA	175 172 Street	4,455	Owned
Public Works	350 Sunny Isles Blvd.	3,897	Owned
Human Services: Miami Beach family Clinic	615 Collins Avenue	5,400	Owned
Fire and Rescue	Fisher Island	4,000	Owned
Parks and Recreation	3400 Rickenbacker Cswy.	100,753	Owned
Water and Sewer	85 W. Enid Drive	1,447	GSA-Water and Sewer
Miami Seaquarium	3400 Rickenbacker Cswy	261,360	GSA-Parks &Recreation
Guard Building-Palm Island	Palm Island	100	City of Miami Beach
Telecommunications Tower	19380 Collins Avenue	214	Intracoastal Towers
Miami Beach Library	2111 Miami Beach Dr.	4,500	City of Miami Beach
Southshore Branch Library	225 Washington Ave.	3,387	City of Miami Beach
Telecommunications Tower	350 Ocean Drive	65	Sonesta Beach Hotel
Library	7501 Collins Avenue	3,000	City of Miami Beach
Telecommunications Tower	9225 Collins Avenue	60	Four Winds, A Condo, Inc.
Virginia Key Waste Water Treatment Plan	3851 Rickenbacker Cswy.	1,480	Owned
Total		673,528	

Source: General Services Administration (GSA), Real Estate Division, 2003

Zone A, which defines the CHHA, does not coincide with the FEMA "V" or "VE" Zones. These zones are insurance rating zones, which were created for flood protection from high velocity water. The "VE" zone differs from the "V" zone by the availability of a base building elevation. These zones are located along the County's coastline and are not limited to the barrier island. Most of the development lying in the "V" and "VE" zones in the northern portion of the County are older and may not meet current regulations. New or modified building construction in these zones is required to obtain a "V" zone certification indicating that the more strict

building requirements associated with these zones, have been met. Most of the coastal lands located in the FEMA "V" zone and lying south of S.W. 184 Street (Palmetto Bay municipal line) are currently designated as "Environmentally Protected Parks" or "Environmental Protection" categories and much of this land lies within the Biscayne National Park. Exceptions to this include Black Point Park and Marina, Homestead Bayfront Park, and Turkey Point.

Based upon all available relevant data, it appears that Objective 9 was achieved.

Policy Relevance. The Objective should be reworded so as not to be year specific. All other policies continue to be relevant and should be retained.

Objective 10

Reduce the exposure of life and property in Miami-Dade County to hurricanes through the planning and implementation of pre-disaster hazard mitigation measures. Pre-disaster planning for post-disaster redevelopment shall direct population concentrations away from the undeveloped designated Coastal High Hazard Areas and away from identified high risk areas during post-disaster redevelopment.

CDMP Monitoring Measure. The monitoring measure for this Objective will be to report on the initiation or completion of pre-disaster studies and other forms of pre-storm preparation for emergency response, recovery, and redevelopment.

Objective Achievement Analysis. In 1993, after Hurricane Andrew, Miami-Dade County adopted a Hazard Mitigation Plan to address Post-Disaster planning and recovery. In 1996, the Board of County Commissioners directed OEM to prepare a comprehensive official emergency management document for all County agencies and municipalities. The Comprehensive Emergency Management Plan (CEMP) provides direction for all emergency situations, natural and man-made, identifying emergencies by type of hazard and area, and outlines strategies for preparedness, response and organization. Pre-disaster functions such as evacuation planning, debris removal, shelters management, and public awareness and notification are just a few topics in this extensive manual.

Since the creation of the CEMP in 1996, the Emergency Operation Center (EOC) has been activated on 34 occasions, 20 of which were storm events. Of the storm events, seven activations involved coordination of multiple agencies and therefore an "After Action Report" was prepared. These reports evaluate the performance and efficiency of existing strategies and policies, and recommends changes to the CEMP and other county policies, where necessary. This procedure has resulted continuous improvements in OEM operations and efficiency, which are reflected in CEMP updates every two years, the last update occurring in February 2003.

The CEMP was developed as a proactive measure for pre-disaster planning. Miami-Dade County has taken additional initiative in this area by reducing density and land use intensity in the CHHA. As noted earlier, the barrier islands, which constitute the CHHA, were largely developed prior to government initiatives to redirect population growth. To regulate intensity and density and conserve environmentally sensitive areas, Miami-Dade initiated several

programs to acquire coastal property through private donations, including the Florida Conservation and Lands Program (CARL) and the Florida Communities Trust (FTC). Table 2.7-9 includes names, acreage and the status of acquisition projects in the coastal areas.

The large pre-disaster planning effort and land purchase indicate that Objective 10 has been achieved.

Table 2.7-9
Coastal Land Acquisitions 1995-2002

	Name	Type	Acres	Location	Priority
1	Arch Creek Addition	Buffer	1.2	NE 135 St. & US-1	❖
2	Bird Key	Mangrove	37.5	NW 79 St. & Biscayne. Bay	A
3	County Line Scrub Site (ATT)	Xeric Coastal Scrub	15	NE 215 St. & 4 Ave.	❖
4	Deering Coastal Addition (FCT)	Wetland	45	SW 152 St. & 67 Ave.	❖
5	Deering Estate Addition (CARL)	Hammock & Pineland	32.6	SW 168 St. & 72 Ave.	❖
6	Deering Glade Parcel (P&R, SNP & SAMP)	Buffer	10	SW 158 St. & Old Cutler Rd.	❖
7	Dolphin Center Addition	Xeric Coastal Scrub	4.2	NW 196 St. & 17 Ave.	❖
8	Biscayne Wetland (FCT)	Coastal Wetland	445	SW 280 St. & 107 Ave.	A
9	Black Point Wetlands (FCT)	Coastal Wetland	271	SW 248 St. & SW 97 Ave.	A
10	Cutler Wetlands (FCT)	Coastal Wetland	1,300	SW 196 St. & 232 St.	A
11	Cutler Wetlands Addition (FCT, P&R)	Coastal Wetland	19	SW 210 St. & 85 Ave.	❖
12	R. Hardy Matheson Preserve Addition	Scrub Mangroves	41	Old Cutler Rd. and 108 St.	A
13	Biscayne Wetlands North Addition	Coastal Wetland	300	SW 270 St. & 107 Ave.	B
14	Tract A	Coastal Wetland	2.7	NE 171 St. & US-1	A
15	Tract B (FCT)	Coastal Wetland	8	NE 165 St. & US-1	A
16	Tract C (FCT)	Coastal Wetland	2.5	NE 163 St. & US-1	❖
17	Tract D	Coastal Wetland	7.8	NE 191 St. & 24 Ave.	A
18	Terama Tract (DEP)	Coastal Wetland	29.5	IN OLETA PRESERVE	❖
19	Barnacle Addition (CARL & City of Miami	Hammock	2	3300 Main Highway.	A
	Total		2574.0		

Source: Department of Environmental Resources Management, 2003

❖ = > 50% Acquired, A= First Priority, B=2nd Priority

NOTE: Acronyms in parentheses following the project name indicate the source of matching funds for which the project has been approved. Funding sources are: CARL=Conservation And Recreation Lands; ATT = AT&T Corp.; DEP=Dept. of Environmental Protection; FCT =Florida Communities Trust; P&R = Miami-Dade Park & Rec., SAMP = Bird Drive Special Area Management Plan; SNP = Safe Neighborhood Parks Bond Program;

Policy Relevance. While the Objective remains relevant, the monitoring measure should be reworded to include the number of "After Action Reports" and the change in policies resulting from each. Policy 10A should include a new date for a Post Disaster Redevelopment Plan and the Hazard Mitigation Plan shall be renamed the Comprehensive Emergency Management Plan. All other policies remain relevant and should be retained.

Objective 11

During post-disaster recovery and redevelopment, Miami-Dade County shall implement its Hazard Mitigation and Post-Disaster Redevelopment Plan and applicable CDMP policies and assist hurricane damaged areas with recovery and hazard mitigation measures that reduce the potential for future loss of life and property.

CDMP Monitoring Measure. The monitoring measure for this Objective will be to report on policy implementation and, in the event of another storm, the successful implementation of recommendations developed prior to the disaster.

Objective Achievement Analysis. A main goal of the CEMP is to "reduce the public's vulnerability to recurrent hazards by the promotion of hazard mitigation strategies, particularly in the areas of critical infrastructure, land use and building codes." As defined through the Federal Stafford Act, hazard mitigation is considered to be "actions taken to reduce or eliminate the long-term risk to human life and property from natural disasters." In 1998 Miami-Dade County, with funding from the State of Florida, formed a Local Mitigation Strategy (LMS), which through its working group reviewed hazard mitigation policies for effectiveness and prioritized hazard mitigation projects for potential funding. State funding for the LMS ceased in 1999; however, Miami-Dade County authorized the continuation of the County's LMS with or without funding.

The LMS Working Group, with representation from county agencies, municipal governments, community agencies and the private sector, has been responsible for major changes in post disaster redevelopment including input into the creation of new evacuation zones, recommendation for gate opening changes for flood protection and recommendations for funding of flood prevention projects.

The LMS, also known as Project Impact, is overseen by OEM and has established a system by which local mitigation initiatives are evaluated and prioritized for potential funding. The LMS prioritizes a list of desired mitigation projects every 6 months. To date, over $100 million dollars of mitigation monies have been awarded to projects prioritized by the LMS. Table 2.7-10 includes a summary of projects funded between 1998 and 2002.

Table 2.7-10
Miami-Dade County Local Mitigation Strategy Projects, 1998-2002

Project Type	Number Of Projects	Total Dollars Funded
Windstorm Mitigation	29	13,998,700
Flood Mitigation	56	85,854,000
Miscellaneous	5	1,636,000
Total	96	101,488,000

Source: Office of Emergency Management, 2003

The creation and continuation of the LMS, and the implementation and funding of LMS projects as noted in Table 2.7-10, indicates that Objective 11 has been achieved.

Policy Relevance. The objective remains relevant and should be retained; however the objective and Policy 11A should be modified to reflect the correct name of the document to be implemented Hazard Mitigation and Post Disaster Redevelopment Plan. Policy 11C should be

reworded since the "South Florida Building Code" no longer exists; it is now the High Velocity Hurricane Zone portion of the Florida Building Code. The monitoring measure for this objective is vague and should be rewritten to include the accomplishments of the LMS. All other policies remain relevant and should be retained.

Objective 12

Protect, preserve, and sensitively reuse historic resources and increase the number of locally designated historic sites and districts and archaeological sites and zones in the coastal area by 2000.

CDMP Monitoring Measures. The monitoring measure for this Objective will be the implementation of hazard mitigation measures for historical and archaeological sites.

Objective Achievement Analysis. To date three historical and archeological sites have implemented hazard mitigation measures to reduce their vulnerability to natural and terrorist hazards; these include the Deering Estate, Viscaya and Fairchild Tropical Gardens. Mitigation funding occurred through FEMA grants with additional monies through Miami-Dade County. Mitigation strategies, which were implemented at the Deering Estate and Viscaya included special flood wind storm protection and redevelopment strategies. Mitigation at Fairchild Tropical Gardens included changes to the irrigation system to allow for recovery of the gardens after a major storm in an organized. Additional Fairchild Tropical Gardens obtained seeds for their rare plants in order to preserve the number and diversity of plant species at the garden.

Based upon this data, Objective 12 has been achieved.

Policy Relevance. The Objective should be reworded so as not to be year specific. All policies continue to be relevant and should be retained. A second monitoring measure should be added to measure the increase in the number of historic archeological sites located in the coastal area.

2.8 INTERGOVERNMENTAL COORDINATION ELEMENT

Since the last EAR was conducted, the Intergovernmental Coordination Element (ICE) has undergone several revisions. An application to amend the CDMP was filed in 1999. The revisions were necessary in order for the CDMP to be in compliance with changes to Section 163.3177(6)(h) of the Florida Statutes. These revisions included modifications to several policies and the addition of several new policies. An important part of implementing the ICE is the monitoring program for evaluating the progress and accomplishments of each objective. Each objective is listed below, followed by the monitoring measure(s) associated with each objective. The findings of each of the monitoring measure are detailed, including its accomplishments, successes and failures. Suggestions are included, where appropriate, for the need to revise policies and/or objectives.

Objective 1

Maintain and improve coordination of planning, development and impact assessment among governmental entities with applicable responsibilities within Miami-Dade County's areas of concern.

CDMP Monitoring Measure. 1) Number and significance of comments made to and responses received from Dade municipalities in conjunction with review of amendments to the Dade County Comprehensive Development Master Plan and the comprehensive plans of the other entities. 2) Use of non-binding dispute resolution process when necessary to resolve disputes. 3) Increased frequency of planning workshops and level of attendance as indication of usefulness. 4) Increased frequency of joint meetings of technical committees of the Metropolitan Planning Organizations of Dade, Broward, and Palm Beach counties to deal with regional transportation issues. 5) Usage of Development of County Impact procedures to coordinate development with the inter-jurisdictional impact. 6) Status of off-site improvements completed pursuant to executed Campus Developments.

Objective Achievement Analysis. Policy 1A addresses monitoring measure No. 1 listed above. This monitoring measure has been achieved. Miami-Dade County has continued to review planning documents transmitted to Miami-Dade County by municipalities. Since 1995, Miami-Dade County has reviewed over 44 municipal comprehensive plan amendments. Most of the documents reviewed consisted of municipal land use plan map amendments, and EAR-based plan amendments.

Monitoring measure No. 2 for Objective 1 calls for the use of the South Florida Regional Planning Council's (SFRPC) non-binding dispute resolution process when necessary to mediate the resolution of conflicts with other local governments and regional agencies, or the use of alternative procedures, including agreements authorized by Section 163.3171(4), F.S., and other non-judicial approaches. There has not been a need for the County to use the SFRPC non-binding dispute resolution process, nor any other alternative procedures.

Policy 1B concerning the increased frequency of planning workshops relates to monitoring measure No. 3. Few, if any, planning workshops were organized since 1995. A better

monitoring measure would be implementation of Policy 1C relating to the formation of a planning technical committee. A Miami-Dade Technical Planners Committee was informally established in January of 1999 to coordinate and discuss planning tools and initiatives by the various planning jurisdictions in Miami-Dade County. The League of Cities initially coordinated the meetings, thereafter and since then, the City of Miami coordinated the meetings. The Planners Technical Committee membership includes all municipalities in Miami-Dade County, the County, the South Florida Regional Planning Council, the Miami-Dade County Schools, Florida Department of Transportation, and the Florida Department of Community Affairs (DCA). In November of 2002, the committee was formally established through by-laws and officers were elected. The purpose of the committee is to address common concerns and share information regarding planning issues in Miami-Dade County. The committee coordinates the planning efforts of local governments, promotes intergovernmental coordination, formulates policy positions, and provides information exchange on planning matters in Miami-Dade County. The committee has been involved with a variety of planning issues including transportation and school planning issues. Beginning in September 2002, the committee coordinated the preparation of the mandated Interlocal Agreement between Miami-County, the Cities of Miami-Dade County and Miami-Dade County Public Schools for Public School Facility Planning. The use of this committee in developing the school interlocal agreement was an invaluable tool in the successful adoption of the Interlocal Agreement by all the local governments and the school board by the March 1, 2003 deadline.

Concerning monitoring measure No. 4, the Regional Transportation Organization (RTO) was created in 1997 by a three-county interlocal agreement comprised of government and private sector representatives from Miami-Dade, Broward and Palm Beach Counties. A technical committee, of the RTO was created to conduct technical reviews. The RTO recognizes that existing surface transportation facilities are inadequate to address the mobility needs of the tri-county region. The RTO developed objectives to meet the needs of the region and has proposed a number of initiatives aimed at achieving the objectives. The RTO supports efforts to establish a South Florida Regional Transportation Authority (RTA). The RTA would address South Florida's transportation projects from a regional perspective, as well as provide inter-county rail and bus service. An RTA is expected to coordinate its activities with the county metropolitan transportation organizations, local transit agencies, and the regional planning councils. The RTA could pool legislative power so that the federal and state funding could be sought on a unified regional basis. The RTA could define land-use and transportation planning, and reach a consensus on regional transportation development ad prioritizing the region's capital transportation improvements projects. This will enhance the efficiency and coordination of all transit service in the region and establish a unified entity to meet South Florida's transportation planning and funding needs. Miami-Dade, Broward and Palm Beach County commissions have endorsed the proposed legislation. The Regional Business Alliance is has spearheaded the effort and has found a state house sponsor for the 2003 legislation and the item is currently in discussion before the house legislature. The local decision-making concerning operational issues would remain with the existing transit agencies rather than be shifted to the RTS. The RTA and three MPO's would jointly work together on transportation plans and its priorities.

Regarding monitoring measure No. 5, the use of the Development of County Impact procedures to coordinate development with other jurisdictions has not been used by other jurisdictions in the

last seven years. In 1975, Miami-Dade County adopted procedures whereby significant developments in municipalities with sub-development of Regional Impact thresholds could be taken under review and advisement by the County's Development Impact Committee, under Section 33-A, of the Code of Miami-Dade County. This review process is triggered by proposed changes in the respective municipalities zoning district boundaries. Since, for the most part, zoning for such development is often already in place only variances are required for approval, there has been little use made of this voluntary application process. In the last EAR, only one project, a condominium development, was reported to have made use of this review process.

Regarding monitoring measure No. 6, Miami-Dade County and the Florida Board of Regents, on behalf of Florida International University, executed a Campus Development Agreement in October of 1996, implementing the requirements of Section 24.155(11)-(15), F.S., regarding campus master plans. The campus master plan outlines the proposed development required to meet students' academic, cultural, recreational and residential needs through the Year 2004. The Miami-Dade County Board of County Commissioners adopted Resolution R-1171-96 in October of 1996. Said resolution required Miami-Dade County and Board of Regents to enter into a development agreement upon the adoption of the campus master plan by the Board of Regents. The development agreement is in effect for ten years, that is, until October of 2006, unless extended by the mutual consent of both parties. The development agreement may be amended from time to time pursuant to Section 240.155(19), F.S. Pursuant to the development agreement the impacts of campus development on all public facilities and services was examined. It was determined that no improvements were required for the public facilities and services, as sufficient capacity is available to accommodate the impacts of the proposed campus development through the Year 2004.

In conclusion, progress has been made in achieving this objective and the objective and its monitoring measures remain relevant and should be retained.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Policies requiring change are discussed below. Other policies continue to have relevance and should be retained.

Policy 1C. This policy should be modified to acknowledge formation of a planning technical committee of Miami-Dade local governments and continued participation in the committee.

Policy 1S. This policy should be modified to conform to the state mandated Interlocal Agreement executed in February 2003 by Miami-Dade County, other local governments and the Miami-Dade County Public School System, pursuant to Section 1013.33, Florida Statutes.

Objective 2

Coordinate with local, regional, and State entities with responsibility in the establishment of Level of Service Standards

CDMP Monitoring Measure. Continued use of areawide and unincorporated area local Level of Service Standards as contained in the Capital Improvements Element of the Comprehensive Development Master Plan until properly amended.

Objective Achievement Analysis. This monitoring measure has been achieved. The Level of Service Standards is contained within the Capital Improvements Element and in the appropriate elements of the CDMP, and has been adhered to except as properly amended. In conclusion, the objective and its monitoring measure remain relevant and should be retained.

Policy Relevance. All policies under this objective continue to be relevant and should be retained.

Objective 3

Encourage the use of interlocal agreements and municipal boundary changes to improve coordination of local development and the effective and efficient delivery of local services.

CDMP Monitoring Measure. 1) Application of guidelines in review of municipal annexation requests. 2) Usage of formal agreements among the necessary governmental bodies to coordinate planning efforts. 3) Executed interlocal agreements for municipal service of unincorporated enclave areas.

Objective Achievement Analysis. Regarding monitoring measure No. 1, annexations to current municipalities and municipal incorporations continue to be a high priority among some community groups within the unincorporated municipal service area (UMSA). Fifteen (15) new municipalities have been established in the State of Florida since 1995, six of them in Miami-Dade County. Currently, there are thirty-three (33) municipalities in the county with one area (Doral) scheduled for a charter vote on June 24, 2003. Miami Gardens held a special election on its charter May 13, 2003, which the electorate approved. Another nine municipalities are proposed. (See Figure 2.8-1)

Chapter 20 of the Code of Miami-Dade County, Boundary Change Procedure, which addresses annexation, was revised to provide specific guidelines on parties initiating any proposed change in boundaries. The guidelines require that the governing body of the municipality adopt a resolution after a public hearing is held and that all owners of property within the area and within six hundred feet of the proposed boundary change are notified. Also, various property descriptions, land use plan, zoning and sketches of the locations must be filed with the clerk of the County Commission. The municipality must describe in detail the character and amount of services, which the municipality would provide to the area if annexed. Also, the character and amount of services currently provided to the area proposed for annexation must be described for comparative purposes. A timetable addressing the provision of the services must be described, as well as the financing of the services and the tax load on the area to be annexed. Generally, the guidelines referenced in Policy 3C have been applied to municipal boundary changes.

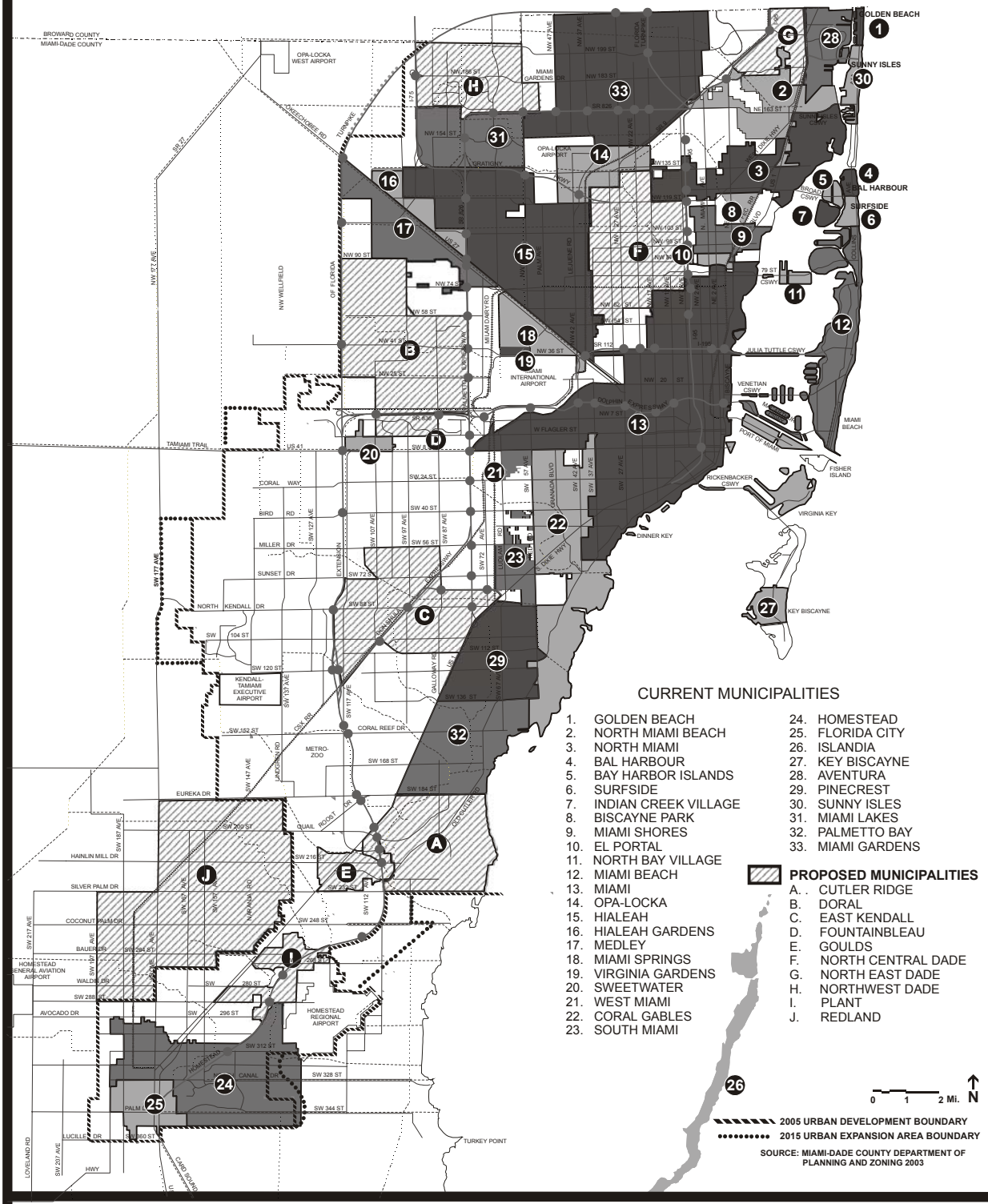


Figure 2.8-1

CURRENT AND PROPOSED MUNICIPALITIES IN MIAMI-DADE COUNTY

DEPARTMENT OF PLANNING AND ZONING

2003EAR ale

Monitoring measure No. 2 refers to the use of formal agreements among local governments to coordinate planning efforts. In 2000, Miami Dade County entered into a Joint Planning Agreement with the City of Miami to facilitate planning for the Miami River. The county and city desired to designate an urban infill and redevelopment area for the Miami River Corridor, from water management structure S-26 to Biscayne Bay, and to apply for and receive benefits available thereunder to facilitate this process. The Miami River was recognized as a vital economic, environmental and geophysical resource to both the City and the County, given the shared jurisdictional boundaries and importance of the River to the local economy. The City and the County worked jointly to establish and to implement a comprehensive plan, covering the corridor, which takes into consideration a broad array of issues impacting and affected by this body of water; setting forth an urban infill and redevelopment program which provides grants and technical assistance to local governments desirous of designating infill and redevelopment areas pursuant to said State statute. The plan was completed in August of 2002 and was adopted by the Miami River Commission as their Strategic Plan that will guide their efforts to promote the Miami River Corridor as a multi-modal transportation corridor. The plan provides a list implementation strategies or recommendations. Though the city and county have not adopted the plan, these entities have commenced review of the implementation strategies to determine those that can be further evaluated for implementation.

In February of 2003, the Miami-Dade County, twenty-four municipalities and the Miami-Dade County School Board entered into an Interlocal Agreement for the coordination of the land use and school facility planning. The Florida Legislature passed a Growth Management Senate Bill 1906, which became effective May 2002. The law requires a comprehensive focus on school planning and mandates coordination of information among local governments through an Interlocal Agreement. Sections 163.3177 and 1013.33, Florida Statutes, require each county and non-exempt municipality within the county to enter into an interlocal agreement with the district school board for the purpose of establishing jointly the specific ways in which the plans and processes for the district school board and local governments are to be coordinated. The school board was designated as the agency responsible for facilitating the Interlocal Agreement with the county and municipalities in Miami-Dade County.

The Interlocal Agreement addresses better coordination of new schools with land development, greater efficiency of the school board and local governments by placing schools to take advantage of existing and planned infrastructure, improving student access and safety by coordinating the construction of new and expanded schools with road and sidewalk construction programs of the local governments, better defined urban form by locating and designing schools to serve as community focal points, greater efficiency and convenience by co-locating schools with parks, ball fields, libraries, and other community facilities, reducing pressures of contributing to urban sprawl and support of existing neighborhoods by appropriately locating new schools and expanding and renovating existing schools and improving the quality of education in existing, renovated and proposed schools. The agreement was developed through the participation and oversight of the Miami-Dade Planners Technical Committee. The agreement requires that the location of public educational facilities must be consistent with the comprehensive plan and implementing land development regulations.

The County currently has over 100 interlocal agreements with various cities and other entities for the delivery of services, which include transportation, police, fire and rescue, public school facility planning, libraries.

Monitoring Measure No. 3 concerns interlocal agreements executed with municipalities to provide services to incorporated enclaves. The county has contracted through interlocal agreement with the City of Coral Gables and City of North Miami Beach to provide certain services to unincorporated enclave areas.

This objective has been achieved and remains and relevant. All policies under this objective remain relevant and should be retained.

Policy Relevance. All policies under this objective continue to be relevant and should be retained.

Objective 4

Maintain consistent and coordinated planning and management of major natural resources within areas with multi-government jurisdictional responsibilities.

CDMP Monitoring Measure. Continued participation by county agencies in East Everglades planning and management studies and coordinating committees. Funding of joint Dade/Monroe County Management Plan for Card Sound portion of Biscayne Bay Aquatic Preserve.

Objective Achievement Analysis. Policy 4D addresses this monitoring measure. This objective has been partially achieved. The South Florida Water Management District acquired the Frog Pond and Rocky Glades west of the levee and south of the 8 and ½ mile square miles. Miami-Dade County continues to coordinate with State and federal agencies that are working on Comprehensive Everglades Restoration Plan (CERP) and the East Coast Buffer Zones.

In 1992, the U.S. Army Corps of Engineers (Corps) was authorized to review Central and South Florida Projects and to develop a comprehensive plan to restore and preserve South Florida's natural ecosystem, while enhancing water supply and maintaining flood protection. The resulting review study commonly called the Restudy was led by the Corps and the South Florida Water Management District (SFWMD). The Restudy took a system-wide look at water. The Restudy culminated in development of CERP. The CERP was submitted to Congress in 1999 and was approved in the Water Resources Development Act of 2000. The plan is the result of a six-year collaborative effort by more than 100 scientists and professionals from more than 30 agencies. The plan will take more than 20 years to construct and will cost an estimated total of $7.8 billion.

The CERP provides a framework and guide to restore, protect, and preserve the water resources of central and south Florida, including the Everglades. It covers 16 counties over an 18,000 square mile area. The CERP is also part of a larger effort to restore the ecosystem and provide for a sustainable South Florida. A strategic plan for this larger effort is being developed under the direction of the South Florida Ecosystem Task Force by federal state, local and tribal leaders.

It will focus on bringing together other restoration efforts under one framework. The plan is the cornerstone of getting the water right because it addresses the problem on a regional basis. Water quality problems are being addressed by the state through the multi-step Everglades Construction Project that uses wetlands for stormwater treatment areas and encourages best management practices to reduce pollutants in runoff from cites and farms. The SFWMD is also developing regional and sub-regional water supply plans to provide for better water resources management. The broad effort by Miami-Dade County to address land use and water management will determine the future economic, social, and environmental sustainability for most of the urban and rural Miami-Dade County.

In the last EAR, the Florida Department of Natural Resources Aquatic Preserve Plan required revisions in order to fund the portion of the Biscayne Bay Aquatic Preserve from State Road 826 south to the northern Biscayne National Park boundary. This remaining portion continues to be without an adopted management plan.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Policies requiring changes are discussed below. Other policies continue to have relevance and should be retained.

Policy 4D. This policy should be reworded to reflect the CERP efforts and not be restricted to the East Everglades.

Objective 4 Monitoring Measure. The monitoring measure should be revised to participation in CERP and State projects.

Objective 5

Initiate cooperative inter-jurisdictional approaches to special intra-regional planning needs.

CDMP Monitoring Measure. 1) Extensive utilization of Biscayne Bay Management and Aquatic Preserve background data, analysis and recommended actions in the development of Surface Water Improvement Management Plans by South Florida Water Management District. 2) County requests for South Florida Regional Planning Council to coordinate planning for intra-regional issues.

Objective Achievement Analysis. The Surface Water Improvement Management Plans are no longer funded by the State of Florida with many of the projects having been incorporated into other Water Management District Plans and CERP projects. Therefore this portion of the monitoring measure could not be accomplished and should be modified and updated to reflect coordination between the Biscayne Bay Management and Aquatic Preserve Plan and CERP projects.

Policy 5A and 5B address the second portion of the monitoring measure. This objective has been achieved. Miami-Dade County has entered into an Agreement and Memorandum of Understanding between the South Florida Water Management District (SFWMD), and the South Florida Regional Planning Council (SFRPC) concerning collaborative preparation of the South

Dade Watershed Plan. The purpose of the South Dade Watershed Management Plan is to formulate an integrated land use and water management strategy for southeastern Miami-Dade County that will ensure the protection and enhancement of the environmental, economic and community values of Biscayne National Park. The plan will comprehensively address the use and management of the land as well as the quality, quantity, timing and distribution of both ground and surface water. It will help establish stormwater treatment performance standards and infrastructure requirements that are based on the water quality impacts of varying land uses, and an area wide long range land use plan. The Watershed Plan encompasses most of the major surface water basins in southeast Miami-Dade County, an area that covers approximately 400 square miles. The Watershed Plan will include recommendations pertaining to land use that will form the basis for proposed amendments to the CDMP. The SFRPC will act as the impartial entity required by CDMP Land Use Policy 3E to prepare the study and plan. In that capacity, the SFRPC will serve as general manager of the study and plan preparation. The SFRPC will be coordinating the process, whereby the watershed plan is formulated, and will work with the SFWMD and the county to physically prepare the final proposed plan.

Policy Relevance. All the policies under this objective were reviewed for continued relevance. Policies requiring changes are discussed below. Other policies continue to have relevance and should be retained.

Policy 5B. This policy should be rephrased to acknowledge that the County and the South Florida Water Management District should coordinate regional programs with County plans and programs. Wording should also incorporate CERP cooperation.

Policy 5C. Should be updated to include current programs.

Objective 5 Monitoring Measure. This monitoring measure should be rephrased to incorporate CERP since the Surface Water Management Plan has been incorporated into various CERP and other Water Management District Programs.

Objective 6

Ensure coordination in the designation of new disposal sites for dredged spoil located in the coastal area for local governments with spoil disposal responsibilities.

CDMP Monitoring Measure. Increased participation by County agencies in the planning for new disposal sites for dredged spoil and in the processes for dispute resolution.

Objective Achievement. Policy 6A addresses this monitoring measure. This objective has been partially achieved. The Department of Environmental Resource Management (DERM) is responsible for dredging of the secondary canals throughout the county. The Department of Solid Waste Management (DSWM) has been working with DERM in identifying suitable areas at DSWM facilities to process the dredge material. Two sites have been identified which will be available over the next few years. One is a ten-acre parcel located on top of the North Dade Landfill East Cell, construction has been completed at this site and it began receiving material in

February 2003. The other one is located at the Cell 20 at the Resources Recovery and is in the design/permitting state.

In 1986, the Florida Inland Navigation District (FIND) began a 15-year Long-Range Dredged Material Management Program to address long-term maintenance of the Intracoastal Waterway on the east coast of Florida. Much of the material shoaling within FIND's channels is introduced through inlets to the Atlantic Ocean from the littoral system and is beach compatible. As such beach placement, where practical became a primary dredged material handling strategy. Upland containment facilities handle material in reaches beach placement is impractical; store any non-beach quality material; and act as staging and a temporary storage area in reaches where beach placement is the primary handling strategy. Miami-Dade County's plan includes provisions for small upland sites that act as barge off-loading facilities to truck material to inland storage facilities far from the waterway.

Policy Relevance. All the policies under this objective continue to have relevance and should be retained.

Objective 7

Encourage the achievement of a coordinated strategy for regional economic development that addresses opportunities and threats and promotes assets in South Florida for sports and entertainment, international business, tourism and other economic development activities.

CDMP Monitoring Measure. Continued partaking by County agencies in the economic development planning efforts of State and regional agencies.

Objective Achievement Analysis. This objective has been partially achieved. In 2000, Miami-Dade, Broward and Palm Beach Counties created a tri-county IT/Telecommunications organization called the InternetCoast. This organization has a twofold purpose: 1) to provide a means by which IT, Telecom and Internet business can meet and interact with each other and, 2) to provide a tri-county organization to conduct joint IT/Telecom activities to market, brand and expand regional businesses. The board of directors includes members from three area economic development agencies, the Beach Council in Miami-Dade County, the Broward Alliance in Broward County and the Economic Development Board of Palm Beach in Palm Beach County. Other board members consist of three people appointed by each economic development organization. InternetCoast holds four general membership meetings per year. The Board of Directors has conducted joint business development trips to Silicon Valley and major worldwide trade shows. In addition, the InternetCoast has advertised in Forbes Magazine.

The Beacon Council of Miami-Dade County and the Economic Development Board of Palm Beach County have an agreement not to use any incentives to attract companies to the other county. There are exceptions if the company is planning to leave Florida. No such agreement yet exists between The Beacon Council of Miami-Dade County and The Broward Alliance of Broward County, though discussions have been held and an agreement might be reached. The cities of Sunrise and Miramar in Broward County have no interest in this concept and routinely try to entice companies to their cities.

Policy Relevance. All the policies under this objective continue to have relevance and should be retained.

Objective 8

Ensure adequate and timely shelter within the region for those residing in hurricane evacuation areas by encouraging all levels of government to work together.

CDMP Monitoring Measure. Continued participation by County agencies in regional planning meetings that address emergency management issues.

Objective Achievement Analysis. This objective has been partially achieved. The Miami-Dade County Office of Emergency Management (OEM) was established in 1968 pursuant to Chapter 252 of the F.S. Section 5 of the Code of Miami-Dade County addresses recovery and mitigation. The recovery phase of an emergency or disaster deals with the functional restoration of a community to the conditions prior to the disaster event. OEM is responsible for coordinating efforts within Miami-Dade County. Numerous county departments play a role in recovery efforts, these departments include, Building, Term Metro, Fire and Rescue, Community Action Agency, Capital Improvement Construction Coordination Office, DERM, Public Works, Solid Waste, General Services Administration and other departments if necessary during short-term or long-term recovery.

Miami-Dade County is active in the state sponsored "Local Mitigation Strategy" (LMS) program. The LMS document fully outlines the methodology for hazard mitigation following an emergency or disaster in Miami-Dade County. The LMS Working Group is made up of representatives from all facets of the Miami-Dade community including county departments, municipalities, public and private not-for-profit organizations and the private sector. In order to streamline Working Group activities various committees may be formed, each addressing an area of concern. Initially, committees were formed to deal with flooding, evacuations, funding community education external policy, agriculture and wildfires. A steering committee of the working group was also formed.

In September of 1999, the Working Group voted to continue the LMS program with or without state funding. The steering committee meets monthly or as needed and the full working group will meet once each calendar quarter. In March 2000, the working group determined that the LMS master document will be updated two or three times each year and the updates including the deletion of completed or abandoned projects, the addition of new projects and/or amendments to existing projects will be published and forwarded to the Florida Division of Emergency Management. In December of 2000 it was agreed to by the Working Group that the LMS master document would be updated and published on June 30th and December 31st each year. In June of 2000, the Miami-Dade Board of County Commissioners passed Resolution R-572-00 formally adopting the Local Mitigation Strategy as official county policy thus further promoting program continuity. On September of 2000, Miami-Dade County, its municipalities and its other organizations were designated by FEMA and the Florida Department of Community Affairs to be a "Project Impact Community." The Working Group then became the Project

Impact Working Group and the Local Mitigation Strategy would continue under the auspices of Project Impact. Following the events of September 11, 2001, the President of the United States of America initiated the USA Freedom Corps and the Citizens Corps concepts including the idea of a Citizens Corps Council. The proposed Council has a membership almost identical to that of Project Impact and LMS Working Group and therefore, the LMS Working Groups has agreed to also assume the mantel of the Citizens Corps Council. In June of 2002 a meeting of the Working Group a "terrorism mitigation committee" was formed to develop counter-terrorism measures and to assist the Citizens Corps Council and any other homeland security office that may be formed within Miami-Dade County or its municipalities.

Policy Relevance. All policies under this objective were reviewed for continued relevance. The policies are directive in nature, continue to have relevance and should be retained.

2.9 CAPITAL IMPROVEMENTS ELEMENT

Objective 1

Upon adoption of this Plan, the CIE shall provide for necessary replacement of existing facilities, upgrading of facilities when necessary to maintain adopted level of service (LOS) standards, and for new facility investments which are needed and affordable.

CDMP Monitoring Measures. Specific monitoring measures were not listed in the CDMP.

Reference was made to a proposed Fiscal Planning program, which would have served as both a prime implementation mechanism and monitoring device. For a variety of reasons, this program was never fully developed and thus monitoring measures were not forthcoming. However, the CDMP bi-annual amendment process turned out to be an effective monitoring device. Beginning with the first adopted CIE in each amendment cycle, the Schedules of Improvements were modified as needed to reflect project deletions, additions, cost adjustments, program timing, revenue sources, and changes in titles or locations. This has assured that the CIE has remained fiscally feasible and provides for the capital improvements to achieve and maintain LOS standards.

Objective Achievement Analysis. There are six policies under Objective 1. The first, Policy 1A simply calls for including capital projects in the CIE as they are identified from the pertinent functional elements. The "Schedules of Improvements" should allow for at least a six-year programming period.

Policy 1B calls for the mix of capital expenditures to contain at least one-third allocated to upgrading and replacement and the remainder to new facilities. With respect to this policy, it can be noted that overall about one-third of all project expenditures were allocated to correcting existing deficiencies. The percentage varied by functional area. It ranges from a high of 98.7 percent for Drainage to a low of 2.7 percent for Water Facilities. These variations relate to the nature of the specific area. Drainage needs are localized and extensive, thus capital programming is on a “worst first” basis with little of no attention given to future problems. Constructing water facilities, on the other hand, requires that future growth be accounted for. When an existing deficiency is corrected, it is often cost effective to oversize facilities in anticipation of future needs.

Policy 1C requires that the County adopt an annual capital budget consisting of the first year of each of the six-year (or longer) program periods.

All of these policies have been carried out commencing with adoption of the CDMP in 1994. A useful way to show this in quantitative form is Table 2.9-1. There, for the functional areas of the CDMP, the Capital Budgets for each year from FY 1995/96 through FY 2002/03 are shown. These are simply the aggregate values for all projects in the first year of the programming cycle. The project totals are sorted by purpose. These are self-explanatory.

At the bottom of the table, the values from the eleven functional areas are summed for each fiscal year. The eight capital budgets total to $10.7 billion, although this number is somewhat misleading since there is some degree of double counting. This is because projects scheduled in a given year may be deferred to a later year for some reason. However, the absolute size of the capital program is not that meaningful by itself. What is being demonstrated is the implementation of the enumerated policies.

Policy 1D addresses two measures by which the County should manage its long-term obligation debt. These measures are: 1) the ratio of the debt service millage to the Countywide millage, and 2) the ratio of the outstanding capital indebtedness to the taxable property base. This policy call for the first ratio not to exceed 20 percent and the second ratio not to exceed 2.5 percent. In FY 2002/03, the first ratio was 6.62 percent and, in FY 1995/96, it was 11.6 percent. The second ratio was 0.28 percent and 0.5 percent in FY 2000/01 and FY 1995/96, respectively.

Policy 1E is referring to the planning and implementation of the County's infrastructure needs. Two types of infrastructure have primacy; roads and water and sewer. For the former, the database used in long range planning contains a variable with the location and pupil enrollment of existing and future public schools. Water and sewer facilities are planned by the Miami-Dade Water and Sewer Department, which provides the major collection and distribution system. Any line extensions or hookups are developer responsibilities and the School Board is no exception.

With respect to policy 1E, it can be noted that the School Board applies for a review on all new schools and expansions with the zoning section of the County's Planning and Zoning Department. A concurrency review is conducted on these applications for their impact on the services.

Miami-Dade County Board of County Commissioners adopted a School Site Plan Review Resolution R-535-92 on May 5, 1992. The resolution authorizes and directs the County Manager to review and make recommendations regarding the consistency of proposed public educational facilities and site plans with Miami-Dade County's Comprehensive Development Master Plan and Applicable Land Development Regulations; approving procedures for such review; construction and opening of public educational facilities are coordinated in time and place with plans for residential development, concurrently with other necessary services; the Miami-Dade County Developmental Impact Committee (DIC), consisting of various County agencies, review and make recommendations to the Miami-Dade County School Board on any and all proposed construction or expansion of public educational facilities. The County and school board have reviewed 130 school site plans in the past eleven years.

In terms of expanded health facilities, during the period under review, no significant additions to public health facilities or new ones were constructed.

Table 2.9-1
CDMP CAPITAL IMPROVEMENTS SCHEDULES
Miami-Dade County, Florida
FY 1996 - 2003
Capital Budgets by Fiscal Year

ELEMENT	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	Total Expenditures Revenues 1996-2003	Percent
				Expenditures Revenues (In Millions of Dollars)						
AVIATION										
Existing Deficiency	95.58	109.10	17.70	1.31	0.00	0.00	0.00	0.00	223.69	4.65
				1.31	0.00	0.00	0.00	0.00	1.31	
Future Growth	327.82	412.95	490.33	180.98	529.40	419.16	608.29	904.89	3,873.82	80.60
				180.98	529.40	419.16	608.29	904.89	2,642.72	
Combined	29.47	10.40	202.11	213.81	150.60	102.11	0.00	0.00	708.50	14.74
				213.81	150.60	102.11	0.00	0.00	466.52	
TOTALS	452.87	532.45	710.14	396.10	680.00	521.27	608.29	904.89	4,806.01	
				396.10	680.00	521.27	608.29	904.89	3,110.55	
Number of Projects	31	35	30	21	22	21	21	18	199	
COASTAL MANAGEMENT										
Existing Deficiency	2.00	0.00	0.00	0.50	0.30	0.49	5.70	5.08	14.07	20.80
				0.39	0.30	0.49	5.70	5.58	12.46	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00	0.00	
Combined	0.00	12.10	11.65	9.33	4.50	16.00	0.00	0.00	53.58	79.20
				9.33	4.00	16.00	0.00	0.00	29.33	
TOTALS	2.00	12.10	11.65	9.83	4.80	16.49	5.70	5.08	67.65	
				9.72	4.30	16.49	5.70	5.58	41.79	
Number of Projects	7	4	1	2	2	2	2	2	22	
CONSERVATION										
Existing Deficiency	7.81	6.25	13.51	15.15	31.79	38.38	97.85	127.15	337.89	85.41
				12.65	9.05	15.60	22.31	95.14	154.75	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00	0.00	
Combined	18.18	18.25	0.00	0.31	0.00	0.00	0.00	21.00	57.74	14.59
				0.31	0.00	0.00	0.00	21.00	21.31	
TOTALS	25.99	24.50	13.51	15.46	31.79	38.38	97.85	148.15	395.63	
				12.96	9.05	15.60	22.31	116.14	176.06	
Number of Projects	15	17	8	25	46	34	41	40	226	

Table 2.9-1 (continued)

ELEMENT	Expenditures Revenues (In Millions of Dollars)								Total Expenditures Revenues	Percent
	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	1996-2003	
DRAINAGE										
Existing Deficiency	0.89	1.22	1.50	4.79	13.85	6.69	5.40	3.08	37.42	98.68
				4.79	1.65	1.80	1.40	3.08	12.72	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00	0.00	
Combined	0.00	0.00	0.00	0.00	0.00	0.40	0.10	0.00	0.50	1.32
				0.00	0.00	0.40	0.10	0.00	0.50	
TOTALS	0.89	1.22	1.50	4.79	13.85	7.09	5.50	3.08	37.92	
				4.79	1.65	2.20	1.50	3.08	13.22	
Number of Projects	2	3	3	2	3	3	3	3	22	
PARK and RECREATION										
Existing Deficiency	11.38	0.00	0.49	2.32	2.39	2.89	4.56	1.83	25.86	6.27
				1.80	2.00	2.00	4.15	0.70	10.65	
Future Growth	14.54	4.78	0.00	0.00	0.00	0.00	0.00	0.10	19.42	4.71
				0.00	0.00	0.00	0.00	0.00	0.00	
Combined	34.91	31.41	34.57	34.70	48.64	54.62	64.63	63.48	366.96	89.02
				19.20	13.22	26.23	43.11	29.03	130.79	
TOTALS	60.83	36.19	35.06	37.02	51.03	57.51	69.19	65.41	412.24	
				21.00	15.22	28.23	47.26	29.73	141.44	
Number of Projects	27	25	29	24	30	34	40	39	248	
SEAPORT										
Existing Deficiency	22.85	9.69	7.10	36.58	68.25	32.09	66.31	137.14	380.01	48.65
				36.38	68.25	32.09	66.31	137.14	340.17	
Future Growth	1.88	25.00	7.40	17.00	61.67	51.90	10.50	10.83	186.18	23.84
				32.25	61.67	51.90	10.50	10.83	167.15	
Combined	2.20	10.15	30.00	12.56	10.70	30.20	79.46	39.58	214.85	27.51
				13.66	10.70	30.20	79.46	39.58	173.60	
TOTALS	26.93	44.84	44.50	66.14	140.62	114.19	156.27	187.55	781.04	
				82.29	140.62	114.19	156.27	187.55	680.92	
Number of Projects	48	45	20	22	20	28	29	38	250	

Table 2.9-1 (continued)

ELEMENT	Expenditures Revenues (In Millions of Dollars)								Total Expenditures Revenues	Percent
	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	1996-2003	
SEWER FACILITIES										
Existing Deficiency	15.50	13.20	16.61	10.20	4.10	2.00	40.32	19.14	121.07	7.78
				3.50	1.50	1.25	87.12	5.70	99.07	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.30	4.00	0.26
				0.00	0.00	0.00	3.70	0.00	3.70	
Combined	261.32	289.04	186.04	149.02	154.27	137.26	133.94	119.62	1,430.51	91.96
				93.76	94.93	92.58	92.51	54.78	428.56	
TOTALS	276.82	302.24	202.65	159.22	158.37	139.26	177.96	139.06	1,555.58	
				97.26	96.43	93.83	183.33	60.48	531.33	
Number of Projects	26	22	29	29	30	29	28	25	218	
SOLID WASTE MANAGEMENT										
Existing Deficiency	1.89	5.19	21.82	14.89	0.10	1.50	1.60	1.00	47.99	15.44
				1.19	0.10	1.50	1.60	1.00	5.39	
Future Growth	0.04	0.00	0.00	1.47	0.03	0.03	0.12	0.88	2.57	0.83
				0.97	3.47	0.00	0.00	0.37	4.81	
Combined	61.72	61.36	34.24	16.69	33.30	27.26	14.83	10.94	260.34	83.74
				2.32	60.33	10.19	10.09	9.00	91.93	
TOTALS	63.65	66.55	56.06	33.05	33.43	28.79	16.55	12.82	310.90	
				4.48	63.90	11.69	11.69	10.37	102.13	
Number of Projects	25	22	19	18	23	28	25	29	189	
SEWER FACILITIES										
Existing Deficiency	15.50	13.20	16.61	10.20	4.10	2.00	40.32	19.14	121.07	7.78
				3.50	1.50	1.25	87.12	5.70	99.07	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.30	4.00	0.26
				0.00	0.00	0.00	3.70	0.00	3.70	
Combined	261.32	289.04	186.04	149.02	154.27	137.26	133.94	119.62	1,430.51	91.96
				93.76	94.93	92.58	92.51	54.78	428.56	
TOTALS	276.82	302.24	202.65	159.22	158.37	139.26	177.96	139.06	1,555.58	
				97.26	96.43	93.83	183.33	60.48	531.33	
Number of Projects	26	22	29	29	30	29	28	25	218	

Table 2.9-1 (continued)

ELEMENT	Expenditures / Revenues (In Millions of Dollars) 1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	Total Expenditures Revenues 1996-2003	Percent
SOLID WASTE MANAGEMENT										
Existing Deficiency	1.89	5.19	21.82	14.89	0.10	1.50	1.60	1.00	47.99	15.44
				1.19	0.10	1.50	1.60	1.00	5.39	
Future Growth	0.04	0.00	0.00	1.47	0.03	0.03	0.12	0.88	2.57	0.83
				0.97	3.47	0.00	0.00	0.37	4.81	
Combined	61.72	61.36	34.24	16.69	33.30	27.26	14.83	10.94	260.34	83.74
				2.32	60.33	10.19	10.09	9.00	91.93	
TOTALS	63.65	66.55	56.06	33.05	33.43	28.79	16.55	12.82	310.90	
				4.48	63.90	11.69	11.69	10.37	102.13	
Number of Projects	25	22	19	18	23	28	25	29	189	
TRAFFIC CIRCULATION										
Existing Deficiency	46.07	22.69	18.43	25.91	34.90	33.99	73.80	49.08	304.87	52.09
				17.90	22.86	27.84	68.05	44.12	180.77	
Future Growth	2.22	0.30	4.70	12.06	0.15	9.20	5.62	0.00	34.25	5.85
				2.60	2.15	4.20	1.60	1.05	11.60	
Combined	49.68	20.75	17.20	23.27	45.38	29.96	28.28	31.66	246.18	42.06
				9.26	13.82	15.69	18.45	11.90	69.12	
TOTALS	97.97	43.74	40.33	61.23	80.43	73.15	107.70	80.74	585.29	
				29.76	38.83	47.72	88.10	57.07	261.48	
Number of Projects	106	89	50	56	67	58	73	66	565	
MASS TRANSIT										
Existing Deficiency	24.81	25.28	69.16	116.33	2.17	38.49	30.02	33.76	340.02	37.36
				111.50	0.66	34.99	24.75	4.43	176.33	
Future Growth	0.00	0.00	0.71	0.71	18.01	37.97	33.35	27.20	117.95	12.96
				0.26	20.26	28.24	23.37	28.63	100.76	
Combined	92.25	99.40	59.13	11.93	48.83	42.97	42.62	54.05	451.18	49.57
				11.52	44.54	40.49	42.36	51.49	190.40	
TOTALS	118.06	124.68	129.00	128.97	69.01	119.43	105.99	115.01	910.15	
				123.28	65.46	103.72	90.48	84.55	467.49	
Number of Projects	37	36	33	30	24	29	25	29	243	

Table 2.9-1 (continued)

ELEMENT	Expenditures Revenues (In Millions of Dollars)								Total Expenditures Revenues	Percent
	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	1996-2003	
WATER FACILITIES										
Existing Deficiency	2.72	2.26	2.26	2.75	4.34	1.40	3.81	3.77	23.31	2.72
				1.75	3.82	1.08	3.44	4.77	14.86	
Future Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.00	0.00	0.00	0.00	0.00	0.00	
Combined	88.07	98.11	101.19	74.30	112.00	146.09	105.14	107.62	832.52	97.28
				46.04	124.69	125.65	129.57	56.86	482.81	
TOTALS	90.79	100.37	103.45	77.05	116.34	147.49	108.95	111.39	855.83	
				47.79	128.51	126.73	133.01	61.63	497.67	
Number of Projects	25	16	20	21	25	25	22	24	178	
ALL ELEMENTS										
Existing Deficiency	231.50	194.88	168.58	230.73	162.19	157.92	329.37	381.03	1,856.20	17.32
				193.16	110.19	118.64	284.83	301.66	1,008.48	
Future Growth	346.50	443.03	503.14	212.22	609.26	518.26	661.58	944.20	4,238.19	39.54
				217.06	616.95	503.50	647.46	945.77	2,930.74	
Combined	637.80	650.97	676.13	545.92	608.22	586.87	469.00	447.95	4,622.86	43.13
				419.21	516.83	459.54	415.65	273.64	2,084.87	
GRAND TOTALS	1,216.80	1,288.88	1,347.85	988.86	1,379.67	1,263.05	1,459.95	1,773.18	10,718.24	
				829.43	1,243.97	1,081.67	1,347.94	1,521.07	6,024.08	
Number of Projects	349	314	242	250	292	291	309	313	2,360	

Source: Miami-Dade County, Department of Planning and Zoning, Research Section from CIE Summary Tables, 1996-2003

Policy 1F calls for the County Commission to convene a panel to examine revenue enhancement alternatives for future infrastructure construction. This policy was not acted upon.

Policy Relevance. All policies under this objective were reviewed for continued relevance. Policy 1F should be updated and somewhat modified; all others should be retained in present form. Objective 1 will be evaluated through the use of information compiled in the annual CIE Summary Table.

Other Considerations

Section 163.3191 (2)(c), F.S., requires the EAR to contain appropriate statement regarding the financial feasibility of implementing the comprehensive plan and of providing needed infrastructure to achieve and maintain adopted level-of-service standards and sustain concurrency management systems through the CIE, as well as the ability to address infrastructure backlogs and meet the demand of growth on public services and facilities. Sanitary sewer, solid waste, drainage, potable water, parks and recreation, and transportation facilities, including mass transit, are the only public facilities and services subject to the concurrency requirement.

As reported in Chapter 2 of this report, major congestion problems existed in a number of important travel corridors. Of a total of 645 roadway segments analyzed, 44 failed to meet the adopted LOS standard. For these roadway segments to meet their adopted LOS standards, it will be necessary to either improve their capacities or use other means to reduce congestion. Only 16 of the 44 failing segments are currently programmed or planned for capacity improvements in the County's 2004 Transportation Improvement Program, Transportation Plan for the Year 2025, and the People's Transportation Plan. Table 2.2.1-3 in this report identifies those roadway segments currently programmed or planned for capacity improvements.

In conclusion, roadway improvements programmed in the 2004 TIP are expected to improve the LOS in nine of the deficient roadway segments, improvements planned in the 2025 Long Range Transportation Plan are expected to improve six segments, and in the People's Transportation Plan, one segment. The remaining segments will affect development until roadway capacity and/or mass transit is improved to alleviate congestion. It should be noted that 30 of the deficient roadway segments are located inside the Urban Infill Area, situation that may prevent the widening of these roadways due to physical constraints or prohibited costs of acquiring the rights-of-way needed for capacity improvements.

Objective 2

Development in high hazard coastal areas will be retained at permitted levels as of 1 July, 1989.

CDMP Monitoring Measure. No specific monitoring measures were listed in the CIE.

Objective Achievement Analysis. To assess the achievement of this objective, all square mile sections in unincorporated Miami-Dade County that contained any land designated as a Coastal

High Hazard Area were identified.[4] According to the Department of Environmental Resources Management, there are only a few such cases. Aerial photographs taken in 1994 and 2001 were carefully examined and it was determined that only two sections showed evidence of development activity over that period. Records indicated that permitted development rights had not changed.

Policy Relevance. All policies under this objective were reviewed for continued relevance and all should be retained in present form. Objective 2 will be monitored by checking development records.

Objective 3

Upon adoption of this Plan, land use decisions will be made in the context of available fiscal resources such that scheduling and providing capital facilities for new development will not degrade adopted service levels.

CDMP Monitoring Measure. Specific monitoring measures were not listed in the CDMP.

Reference was made in the CIE to a proposed Fiscal Planning program which would have served as both a prime implementation mechanism and monitoring device. For a variety of reasons, this program was never fully developed and thus specific monitoring measures were not forthcoming. While not formally put in place, in the period since Plan adoption, a good deal of progress has been made. For the future, improvement needs to be made in linking operating and capital costs, better identification of revenue sources, extension of the capital planning horizon beyond the current six years, and most of all, improved accounting of the direct relationship between specific projects and LOS standards (i.e. a better monitoring system).

Objective Achievement Analysis. Policy 3A is generally adhered to by operational departments in the preparation of their capital programs. Policies 3B and 3C relate to concurrency requirements. Both policies have been implemented in large measure. The Miami-Dade County concurrency ordinance is known as the Metro Miami-Dade County Concurrency Management Program and was passed in July, 1989. It is Section 33G of the Code of Metropolitan Dade County and Sec. 33G-5 reads:

As provided herein, no development order shall be issued where levels of service (LOS) for all public services and facilities will not meet or exceed LOS standards or where the issuance of the development order would result in a reduction in the level of service for any service or facility below LOS standards.

Seven County agencies are involved in concurrency review. These are Department of Planning and Zoning, Department of Environmental Resources Management, Fire and Rescue, Miami-Dade Transit Agency, Park and Recreation, Public Works, and Solid Waste Management.

[4] The Coastal High Hazard Area is defined as the barrier islands.

Development actions are grouped into three classes, Initial, Intermediate and Final Development Orders to be reviewed for concurrency. These categories include the following:

Initial Development Order: Zoning District Boundary change includes Use Variance, New Use, Unusual Use, Special Exception, Site Plan Approval, Modification of Zoning Covenant or Condition, and any Non-Use or Administrative Variance when such variance would increase the potential floor area or number of units.

Intermediate Development Order: Any Final Plat or Waiver of Plat approved prior to July 1, 1989, any Tentative Plat, or any Permit authorizing the alteration of land topography required pursuant to Chapter 24 or 28 of the Miami-Dade County Code.

Final Development Order: Any Final Plat or Waiver of Plat approved subsequent to July 1, 1989, most Building Permits, and any Certificates of Occupancy authorizing a change in use or an initial use of a parcel or structure where no other Final Development Order approved by ordinance is in effect.

This process certainly assures that all development regulations are adhered to and CDMP provisions as well, since Planning and Zoning staff are involved at virtually every step. Their presence assures that the broader infrastructure provision priorities are adhered to, i.e. first priority within the UDB, second priority the UEA and essentially no incursions into the Agricultural or Open Land areas. However, notwithstanding this elaborate review and control process the stipulation that previously approved development should be served prior to new development approvals has not been followed in a consistent manner. In part, this is a result of the large deficits which existed before the new requirements coupled with the imperative to allow new development to go forward for a variety of reasons.

Policy Relevance. All policies under this objective were reviewed for continued relevance and all should be retained in present form. Concurrency records will be utilized to monitor and evaluate Objective 3.

Other Considerations

During the CDMP EAR major issue preliminary scoping meetings with State and regional agencies in October and November 2002, the Florida Department of Transportation, District VI representative raised an issue regarding the need to evaluate the effectiveness of County's adopted Concurrency Management Program in urban infill and transportation exception areas. While this was not considered a major issue, the County agreed to evaluate the issue where data exists. Below is a brief response to the concern raised by FDOT.

The 1985 Florida Growth Management Act required that local governments ensure that public facilities needed to support development were made available concurrent with the impacts of development. Later, it was recognized that the concurrency requirements, particularly related to roadway levels of service, were encouraging development on the urban fringe, where capacity was generally available and could be utilized without violating level of service (LOS) standards. The Florida Department of Community Affairs (DCA) recognized the desirability of relaxing

roadway LOS standards in certain dense urban areas, and made provisions for transportation concurrency exceptions areas (TCEA) to promote infill, redevelopment, and compact urban development. Consequently, Miami-Dade County defined the adopted the Urban Infill Area (UIA) area as a TCEA and also adopted the designation of areas called the Redevelopment Concurrency Exception Areas (these areas are defined in the Traffic Circulation Subelement Policy 1B and in the Concurrency Management Program description found in the Capital Improvement Element). The purpose of the UIA and RCEAs is to encourage infill development and redevelopment without meeting transportation concurrency requirements.

Since no specific objective in the CDMP addresses the concern raised by FDOT, all objectives and policies in the CDMP that relate to infill were reviewed and evaluated to assess the effectiveness of the concurrency exception areas in the UIA and RCEAs.

Land Use Element

Objective 1. This objective in the Land Use Element (LUE) emphasizes concentration and intensification of development around activity centers, development of well designed communities containing a variety of uses (housing types and public services), renewal and rehabilitation of blighted areas, and contiguous urban expansion rather than sprawl.

The majority of activity centers designated in the Adopted 2005 and 2015 Land Use Plan (LUP) map are located inside the UIA. Urban centers are areas designated in the LUP map destined to become hubs for future urban development intensification in Miami-Dade County, around which a more compact and efficient urban structure will evolve. Three scales of urban centers are planned: Regional, the largest, such as the downtown Miami central business district; Metropolitan such as Downtown Kendall in South Miami-Dade; and Community centers which serve localized areas, especially around Metrorail stations and bus stops along the exclusive Busway in South Miami-Dade. Eight Metropolitan and fifteen Community urban centers are located inside the UIA, and four Community urban centers are located in RCEAs outside the UIA. This objective promotes and encourages infill development and redevelopment.

Policies 1A, 1B and 1C under this objective require high intensity, well designed urban centers and infill development on vacant sites in urbanized areas, and redevelopment of substandard or underdeveloped urban areas where all necessary urban services and facilities exist and have capacity to accommodate additional demand. Policy 1K, on the other hand, commits Miami-Dade County to improve Community Development Block Grant (CDBG)-eligible areas, enhance the Enterprise Zone and Federal Enterprise Community programs as tools to expand the economy in locally distressed areas.

Objective 7. This objective focuses on development and redevelopment in existing and planned transit corridors, which are conducive to pedestrian and transit use. Miami-Dade County through its planning, regulatory and development activities encourages and promotes development of a wide variety residential and non-residential land uses and activities in planned urban centers around the existing and planned rapid transit and Exclusive Busway corridors. Land uses that may be approved around transit stations and bus stops include housing, shopping and offices in moderate to high densities and intensities. This objective is currently being implemented

through the development of master plans for planned urban centers and areas inside the UIA, the adoption of implementing ordinances, and redevelopment of areas around the Metrorail Stations.

Objective 10. This objective of the LUE requires the County to accomplish energy efficient development through land use patterns, site planning, landscaping, building design, and development of multimodal transportation systems. Policy 10A in particular facilitates contiguous urban development, infill, redevelopment of substandard or underdeveloped urban areas, high intensity activity centers, mass transit supportive development, and mixed-use projects to promote energy conservation.

In summary, all these LUE objectives and policies, which relate to infill and redevelopment, have been and continue to be implemented. Since 1998, Miami-Dade County has sponsored nine charrettes for areas inside the UIA and RCEAs. A charrette is a combination of town meeting with a weeklong design studio. Master plans are prepared for the areas with the input of property owners, residents, interest groups and professionals in the planning field. The concepts and recommendations of the master plan are later implemented through the adoption of zoning ordinances. The first charrette, the Downtown Kendall Charrette, was held in June 1998, to build consensus on the future of the Dadeland Metropolitan Urban Center located in South Miami-Dade. The design group combined the input into a single plan, the "Downtown Kendall Master Plan", and in December 1999, the Board of County Commissioners adopted Ordinance No. 99-166, the Downtown Kendall Urban Center Zoning District, to implement the recommendations and concepts of the Master Plan. Since the adoption of the zoning ordinance, the County has approved seven mixed-use developments totaling 2,862 residential units and 184,054 sq. ft. of retail space. As of the date of this report, four more mixed-use development proposals in the Downtown Kendall Urban Center District are currently being processed.

Mass Transit Subelement

Objective 2. This objective requires the coordination of efficient transit service and facilities with the location and intensity of designated future land use patterns as identified on the Land Use Plan map, and the goals, objectives and policies of the Land Use Element. Policy 2B of this objective specifically addresses the need for designing and developing the areas surrounding the rapid transit stations at a minimum as community urban centers, containing land use and development designs that promote transit use as defined in the LUE.

Miami-Dade Transit through its joint development program has been implementing this objective by including in its request for development proposals the provision of mixed-use and affordable housing. Development proposals have been approved for Dadeland South, Dadeland North, South Miami, Douglas Road, Coconut Grove, Martin L. King, Jr., Santa Clara and Allapattah Metrorail Stations. In total, 1,139 residential units, 429,200 sq. ft of office space and 417,100 sq. ft. of retail space have been approved for development. Negotiations are underway for development of other Metrorail stations. As explained above, all the Metrorail stations are designated Metropolitan or Community urban centers and located inside the UIA.

Other details regarding the implementation of these objectives and policies are described in the Sections 2.2.1 Traffic Circulation and 2.2.2 Mass Transit Subelement of this report.

In conclusion, the implementation of the Concurrency Management Program and the objectives and policies of the CDMP related to infill development and redevelopment in the UIA have been achieved. From the success of the Downtown Kendall Urban Center Zoning District and the joint development activity around the Metrorail stations, it can be inferred that concurrency exceptions in the UIA and RCEAs has been effective. Without the traffic concurrency exceptions in place greater mixed use and higher density development could not have occurred. Further evidence in support of this comes from a study done by the Research Section in late 2001. The study found that around Metrorail Stations within the UIA there was planned or underway 11,406 housing units, 2.4 million square feet of office and 1.6 million square feet of commercial space and 2.302 hotel units. These projects are both infill and redevelopment. Likewise, the Downtown Development Authority reported in late 2002 that over $4 billion of new development has recently been completed, is under construction or is approved. This includes 17,000 dwelling units, 1,200 hotel rooms, 1.8 million square feet of office and 1.5 million of retail space (some of this may be duplicative with the findings of the Research study). These data certainly attest to the fact that in the central portion of the UIA a great deal of redevelopment is occurring. Concurrency exceptions likely had some positive influence on these developments.

Objective 4

Planning for further development will be done such that the level of service standards for those services listed in the CIE will be upgraded and maintained at adopted levels by assuring that adequate fiscal resources are made available.

CDMP Monitoring Measure. No specific monitoring measures were listed in the CIE.

Objective Achievement Analysis. Policy 4A calls for the adoption and application of funding sources to support the capital program required for establishing and maintaining level of service standards. In this regard, Miami Dade County has always been in the forefront of creativity, even before the advent of the CIE requirement. This pattern has continued since the adoption of the first CIE in late 1988. At that time, the CIE listed 31 funding sources to support the $3.2 billion program. The most recently adopted CIE lists 82 funding sources to support $10.1 billion worth of capital improvements. Some of the increase in the number of sources is the result of accounting changes in which earlier ones are subdivided, but many are new (including increases in rates for existing sources). Most of the functional categories dealt with by the CIE were affected.

The Aviation Department has been active in issuing revenue bonds and since November, 1994 has imposed a Passenger Facilities Charge. The County's road program has been expanded through funds from impact fees (since June, 1989) and commencing in January, 1994 from a five-cent local option gas tax. The Miami-Dade Transit Agency succeeded in obtaining the federal funds to complete the Palmetto Metrorail Extension and Station. Funds to support the County's transit system have been increased by the one-half cent local sales tax approved by countywide referendum in November, 2002. Water and sewer rates have been raised to help fund upgrading and expansion of these systems. The Stormwater Utility District came into being

in 1992 and now supports a vastly expanded drainage program. Local park development has been enhanced by the impact fees collected since June, 1990 and passage of the Safe Neighborhood Parks bond program in November, 1997. Finally, a special one-half cent millage was applied for two years to provide funds for the acquisition of environmentally endangered lands.

In relation to Policy 4B, the Miami-Dade County Appraiser assesses the value of real property completely in accordance with state statutes. This includes the timely reassessment of the values of land or structures as they may be affected by the provision of public infrastructure.

In reference to Policy 4C the FDOT, Miami-Dade County Public Works Department, and Miami-Dade Transit identify their roadway and mass transit project needs to meet current and future demands. Staff from these agencies recommend alternatives and cost estimates (including right-of-way, number of lanes, interchange/intersection configurations, new bus routes and realignment or extension of existing ones, etc.) to both the Long Range Plan Steering Committee and the Transportation Improvement Program (TIP) Development Committee of the MPO for technical review. The technical committees prioritize the projects and assuming none of the projects are already listed in the Long Range Transportation Plan (LRTP), amendments are needed to include them. If funding is identified, the project(s) could be included in the Cost Feasible Plan, otherwise they would need to be included in the Priority IV Unfunded Needs category. If funding is identified, the project(s) may also be eligible for inclusion in the TIP, although they must first appear in the LRTP. In highway and transit planning activities, FDOT, PWD, and MDT give highest priority to the funding of necessary capacity improvements to roadway and transit services that would help to relieve congestion on both Florida Intrastate Highway System and County Minor arterials and collectors, which are operating below their CDMP-adopted LOS Standards.

Policy 4D relates to the consideration that should be given to the application of unit charges for the use of public facilities, especially what is known as "peak load pricing." This concept has been given more attention in recent years, at least through discussion and one study on road pricing was done. However, no follow-up implementation occurred.

Policy Relevance. All policies under this objective were reviewed for continued relevance and all should be retained in present form. For each CIE category, the dollar ratio of unfunded projects to the total of both funded and unfunded projects will be tracked and will serve to measure progress on Objective 4.

Other Considerations

Section 163.3191 (2)(c), F.S., requires the EAR to contain appropriate statements regarding the financial feasibility of implementing the comprehensive plan and of providing needed infrastructure to achieve and maintain adopted level-of-service (LOS) standards and sustain concurrency management systems through the CIE, as well as the ability to address infrastructure backlogs and meet the demand of growth on public services and facilities. Sanitary sewer, solid waste, drainage, potable water, parks and recreation, and transportation facilities, including mass

transit, are the only public facilities and services subject to concurrency requirement. All these facilities and services met their adopted LOS standards, except for certain roadways.

As reported in Section 2.2.2 Traffic Circulation Subelement, major congestion problems existed in a number of important travel corridors. Of a total of 645 roadway segments analyzed in 2002, 34 failed to meet the adopted LOS standard. Of these, 30 are located inside the Urban Infill Area (UIA), two are located between the UIA and the Urban Development Boundary (UDB), and two outside the UDB. Of the 30 segments inside the UIA, three are programmed for capacity improvements in the County's 2004 Transportation Improvement Program (TIP), and five are planned for capacity improvement in the Transportation Plan for the Year 2025. It should be noted that all 30 roadway segments are exempt from the concurrency roadway LOS standards. The two deficient segments located inside the UDB are programmed for road widening, and the two roadway segments located outside the UDB are programmed for intersection capacity improvements. Table 2.2.1-3 in this report identifies those roadway segments currently programmed or planned for capacity improvements.

In conclusion, roadway improvements programmed in the 2004 TIP are expected to improve the LOS in six of the deficient roadway segments, and improvements planned in the 2025 Long Range Transportation Plan are expected to improve the LOS in five of the roadway segments. It should be pointed out that roadway widening inside the UIA is difficult due to the existing physical constraints and/or the prohibitive cost of acquiring the additional rights-of-way needed for capacity improvements. However, with the approval of the half-cent sales tax by Miami-Dade voters last November to fund the People's Transportation Plan, Miami-Dade Transit will improve the County's transit system through expanded service routes, increased headways and longer hours of operation and, therefore, help alleviate traffic congestion throughout the urbanized area.

Objective 5

Upon adoption of this plan, development approvals will strictly adhere to all adopted growth management and land development regulations and will include specific reference to the means by which public facilities and infrastructure will be provided.

CDMP Monitoring Measures. No specific monitoring measures were listed in the CIE.

Objective Achievement Analysis. To evaluate progress in achieving CIE Objective 3 refer to the following individual public facilities and services element EAR's for: 1) Land Use Objectives 2 and 9 Achievement Analysis; 2) Traffic Circulation Objective 1 Achievement Analysis; 3) Mass Transit Objective 1 Achievement Analysis; 4) Conservation Objective 5 Achievement Analysis (for flood protection/drainage LOS standards); 5) Water, Sewer and Solid Waste Objective 2 Achievement Analysis; and 6) Recreation and Open Space Objective 1 Achievement Analysis.

Policy Relevance. All Policies under this objective have been reviewed for continued relevance and should be retained. Policy 5B should be revised to remove the reference to "fiscal

planning" and substitute a brief description of the process by which the second part of Objective 5 is carried out. A new monitoring measure will be developed for this Objective.

2.10 EDUCATIONAL ELEMENT

In 1996, Miami-Dade County adopted an amendment application adding an Educational Element to the Miami-Dade County Comprehensive Master Plan (CDMP). The Miami-Dade County Public School staff, in consultation with County staff, prepared the amendment for Miami-Dade County. For many years school overcrowding had become a prominent issue during planning and zoning-related public hearings. This increased requests for more coordinated planning between Miami-Dade County and the Miami-Dade County Public School System than had occurred in the past. The Educational Element was proposed to facilitate this coordination.

The goal of the of the Educational Element is to develop, operate and maintain a system of public education by Miami-Dade County Public Schools, in cooperation with the county and other appropriate governmental agencies, which will strive to improve the quality and quantity of public educational facilities available to the citizenry of Miami-Dade County, Florida.

Objective 1

Work towards the reduction of the overcrowding which currently exists in the Miami-Dade County Public School System while striving to attain an optimum level of service. Strive to provide additional solutions to overcrowding so that countywide enrollment in Miami-Dade County's public schools does not exceed 145% of enhanced program capacity. Additionally, by 2005 the countywide enrollment in Miami-Dade County's public schools does not exceed 125 % enhanced program capacity, and by 2015 does not exceed 100%. This numeric objective is adopted solely as a guideline for school facility planning and shall not be used as a Level of Service standard (LOS) or as a basis for denial of development orders.

CDMP Monitoring Measure. Policies relating to the maintenance and improvement of specific level of service for public educational facilities, as specified in the Educational Facilities Impact Fee Ordinance, shall be reviewed annually. Each year, the District will compare the official enrollment of the school system with the number of student stations available to determine the current operating LOS.

Objective Achievement Analysis. This objective has been partially achieved. Annually, the Miami-Dade County Public Schools (MDCPS) analyzes the Utilization Report with the official enrollment and the number of student stations available to determine the current operating LOS. The official enrollment or school census is based on the Full Time Enrollment (FTE) for the month of October each year. Actual school enrollment may vary month to month through out the school calendar year, but the October FTE is considered the official student population enrollment figure for the school year for analysis purposes. Table 2.10-1 shows total student enrollment by school facility type (elementary, middle and high school), total enrollment system wide, and system wide school utilization capacity (enhanced program capacity) between 1995 and 2002. The mainstream public school enrollment figures do not include charter, magnet and alternate enrollment.

Table 2.10-1
Miami-Dade County Public Schools
Total Enrollment School Facility Type and Enhanced Program Capacity
1995-2003

Year	Elementary School Enrollment	Middle School Enrollment	Senior School Enrollment	Total Enrollment	Enhanced Program Capacity
1995*	173,477	73,657	74,648	321,782	144%
1996	175,995	74,821	76,130	326,946	102%
1997	173,866	75,253	79,922	329,041	97%
1998	174,231	77,205	86,693	338,226	105%
1999	173,340	77,439	87,248	338,027	104%
2000	176,176	80,123	94,520	350,819	108%
2001	180,127	80,127	98,851	359,695	109%
2002**	172,218	80,485	100,512	353,215	113%

*Utilization Percentage based on permanent Existing Satisfactory Student Stations (ESSS)
**Utilization Percentage based on Florida Inventory of School Houses (FISH) capacity (both permanent and relocatables)

In terms of total annual school enrollment, Table 2.10-1 shows there has been a gradual increase in enrollment for the last eight years, except between the years of 1998 and 1999, and 2001 and 2002, where there was a small decrease. During the eight year period from 1995 to 2002 there has been an approximate 10% increase annually in student enrollment. Since October of 1995, 15 new elementary schools, and 15 Primary Learning Centers (PLCs), 4 middle schools and 3 senior high schools opened in Miami-Dade County. The MDCPS increased coordination efforts and are committed to cooperatively seek solutions to the overcrowding problem. The school board will continue to construct PLCs at sites throughout the county. Because their size and facility requirements are reduced, PLCs can be built more quickly, on less land, and at lower costs than traditional elementary schools. These facilities reduce the overcrowding rate in elementary schools by providing alternative facilities for kindergarten through second grade students.

The Enhanced Program Capacity has generally increased from year to year, similar to student enrollment, which has also increased from year to year. However, from 1995 to 1996 the Enhanced Program Capacity went from 144% to 102%. This is primarily attributable to a change in methodology in calculating school utilization capacity. In 1995 school capacity was based solely on the number of permanent Existing Satisfactory Student Stations (ESSS). A student station is defined by the Florida Department of Education (FDOE) as the area necessary for a student to satisfactorily engage in learning activities. Beginning in 1996, the year the CDMP Educational Element was adopted, MDCPS modified the methodology for calculating school capacity by introducing the "enhanced program capacity" concept. This is the method of capacity service adopted in the Educational Element. Enhanced program capacity considers permanent student stations in full, temporary student stations in full, and all spaces, which can be used to accommodate classrooms regardless of intended use in order to provide an indication of the maximum capacity of a public school facility to accommodate students. However, the optimal situation is for the number of students enrolled in a particular school facility not to exceed the number of permanent student stations. This capacity methodology was used through 2001. Beginning in 2002 the MDCPS initiated the use of the Florida Inventory of School

Houses (FISH) capacity. The FISH capacity considers only total permanent student stations and relocatable student stations.

In February of 2003, the county, the cities in Miami-Dade County and the Miami-Dade County School Board entered into an interlocal agreement for the coordination of land use and public school facility planning. The agreement addresses better coordination of new schools with land development, greater efficiency of the school board and local governments by placing schools in locations to take advantage of existing and planned infrastructure, improving student access and safety by coordinating the construction of new and expanded schools with road and sidewalk construction programs of the local governments, better defined urban form by locating and designing schools to serve as community focal points, greater efficiency and convenience by co-locating schools with parks, ball fields, libraries, and other community facilities by taking advantage of joint use opportunities, reducing pressures of contributing to urban sprawl and support of existing neighborhoods by appropriately locating new schools and expanding and renovating existing schools, and improving the quality of education in existing, renovated and proposed schools. The agreement requires that the location of public educational facilities must be consistent with the comprehensive plan and implementing land development regulations.

Objective 1 should be modified to reflect a change to the MDCPS FISH capacity standard replacing the "enhanced programmed capacity", and extend the desired outcome dates to 2015 and 2025.

Policy Relevance. All policies under this objective continue to have relevance and should be retained. The following policies should be considered for modification.

Policy 1.6. This policy should be modified to correct the Florida Statutes reference to Section 1013.33, Florida Statutes and reference the adopted School Interlocal Agreement.

Policy 1.7. This policy should be modified to provide for utilizing enrollment projections based on demographic, revenue, and education estimating conferences pursuant to Section 216.136, Florida Statutes, as modified by the School Board pursuant to development data and agreement with the local governments and Office of Education Facilities and SMART Schools Clearinghouse. The School Board will also continue to coordinate with the cities and the county regarding developments trends and future population projections.

Objective 2

Obtain suitable sites for the development expansion of public educational facilities.

CDMP Monitoring Measure. Monitored through the annual inventory and assessment by the Miami-Dade County Public School System of School Board owned property. The number of new sites shall be reported annually and in the full review period reported in the EAR.

Objective Achievement. This objective has been achieved. Since 1995, the Miami-Dade County Public Schools, pursuant to F.S. 235.193(4), provides written notice to Miami-Dade County on its intent to acquire or lease specific property sites for new public school facilities.

Miami-Dade County reviews individual sites for consistency with the CDMP land use plan map and interpretive text, and relevant CDMP policies, and provides a written response to the MDCPS. To date, the County has issued 111 school CDMP consistency letters to the School District. The majority of sites reviewed were located along the urban fringe. Not all sites reviewed were actually acquired.

Below is a summary of the properties acquired by the Miami-Dade County School District between 1995 and 2002 by fiscal year. The School District maintains an annual inventory and assessment of school Board owned properties to assist in determining its future needs. Appendix 2.10-A contains a complete listing and description of acquired sites.

Fiscal Year 1995-1996 - Thirteen Parcels Acquired
Two parcels were acquired for two new elementary schools; five parcels were acquired for one new elementary school; two parcels were acquired for expansion to one existing elementary school; one parcel was acquired for expansion to one existing elementary school; one parcel was acquired for one new Primary Learning Center; one parcel was acquired for one new high school; and one parcel for a school staff parking at an elementary school.

Fiscal Year 1996-1997 - Seven Parcels Acquired
One parcel was acquired for one new elementary school; two parcels were acquired for expansion to one new elementary school; one parcel was acquired for expansion to one existing elementary school; two parcels were acquired for expansion to one existing elementary school; one parcel was acquired for one new Primary Learning Center; one parcel was acquired for one new high school; and one parcel was acquired for expansion to one senior high; and one site donated for future education use.

Fiscal Year 1997-1998 - Two Parcels Acquired
Two parcels donated for future educational use; and one parcel for South Transportation Center, facility already built.

Fiscal Year 1998-1999 - Four Parcels Acquired
One parcel donated for one new middle school; two parcels for parking at School District administrative offices, and one parcel pending litigation.

Fiscal Year 1999-2000 - Six Parcels Acquired
One parcel for one new elementary; one parcel for one new middle; one parcel for one new senior high; one parcel for future educational use; one parcel for adult center, facility already built; and one parcel for South Transportation Center, facility already built.

Fiscal Year 2000-2001 – Three Parcels Acquired
One parcel for one new elementary; one parcel for expansion to existing senior high; and one parcel for Records and Forms Management Warehouse, site already built.

Fiscal Year 2001-2002 – Seven Parcels Acquired
Four parcels for expansion to existing high school; one parcel for the Northeast Transportation Center, facility already built; and two sites donated for future educational use.

Policy Relevance. **All policies under this objective continue to have relevance and should be retained.**

Objective 3

Miami-Dade County Public Schools, in conjunction with the County and other appropriate agencies, will strive to improve security and safety for students and staff.

CDMP Monitoring Measure. Monitored through the review and analysis of the statistics relating to school safety, as compiled annually, by the MDCPS Division of Police. A review and analysis of new and existing reactive and proactive safety and crime prevention programs will also be conducted on an annual basis.

Objective Achievement Analysis. Overall, this objective has been partially achieved. In response to the need for increased school site security, four pilot programs have been implemented in selected schools throughout the county. The evaluation of the four security pilot programs was conducted during the 1998-99 school year by the School District through the use of surveying the stakeholders. The programs are: 1) Parents on Patrol Program, 2) I.D. Badge Program, 3) Semi-Closed Lunch Program, and 4) School Resource Officer Scheduled Perimeter Patrols.

Data was analyzed to detect any changes in the total number of incidents reported for the 1997-98 and 1998-99 school years for the 38 schools involved in this evaluation. No statistically significant differences were found. In looking at this data by school, there is no evidence of a clear trend, as in some schools the total number of incidents decreased while in other schools there was an increase. This may suggest that these security programs alone are insufficient to positively impact the total number of incidents. There was wide support among the stakeholders as to the value of and the desire to continue these security programs. The benefits are perceived to be high. As a result of the evaluation it was recommended that the four security programs continue, to consider expansion of these programs to other schools, and to develop written policies/procedures for the various security programs.

Another program evaluated is the Drug Free Youth in Town; the evaluation was conducted in 1998. This program was started at Homestead Senior High during the 1992-93 school year and has since expanded to other schools. A long-term goal of the program is to establish the program in all middle and senior high schools in the district. The general objective of the evaluation was to determine the impact that the program is exerting on its members and to assess the efficiency of the operation. Data was collected through the use of survey instruments. The survey determined 85% of the students surveyed indicated that they had undergone the initial drug screening and 91% indicated that had signed a contract, which allowed for drug screening to be conducted. The role of the advisors included holding meetings preparing special activities and facilitating the program in general. Advisors organized the implementing programs at the school level. Results from the student survey indicate a strong positive attitude toward the program, and that participation had enhanced the students' self-esteem and leadership skills. There is some evidence to support the contention that additional resources are needed and expansion of the

program to other schools. Recommendations for the program include instituting an audit process to ensure that all students have been initially screened and sign a contract; implementing procedures to ensure students complete community service requirement; and improving the coordination of activities between the program and the schools so as to allow adequate preparation time for program activities.

The Miami-Dade County Public Schools Division of Police maintains records and statistics relating to school safety. Table 2.10-2 provides comparative statistics for 61 different types of offenses for the school calendar years beginning in 1998-1999 through seven months of 2002-2003. Also included are the number of offenses cleared by arrest, and those involving firearms in this analysis. The table shows that total incidences for the school years between 1998-1999 and 2001 and 2002 have steadily increased, although the specific offences seem to be on decline, notably graffiti, narcotic-use, robbery, simple assault, trespassing and vandalism.

Policy Relevance. All policies under this objective continue to have relevance and should be retained.

Table 2.10-2
Miami-Dade Schools Police
5 Year Comparative Analysis
1998-2003

TYPE OF OFFENSE	Year				
	8/31/98-8/28/99	8/30/99-8/27/00	8/28/00-8/27/01	8/27/01-8/25/02	8/26/02-3/31/03
AGGRAVATED ASSAULT	107	98	112	80	71
AGGRAVATED STALKING	0	0	6	6	4
AGGRAVATED BATTERY	210	166	208	140	115
ALCOHOL POSSESSION	17	12	17	19	11
ALCOHOL USE	25	28	32	21	27
ARSON	57	45	53	26	20
ARSON, OCCUPIED	0	0	4	1	4
ASSIST OTHER AGENCY	5	197	263	301	180
AUTO ACCIDENT	897	1168	1287	1056	632
AUTO THEFT	117	71	42	44	22
BAKER ACT	167	224	279	275	174
BOMB THREAT	116	96	85	110	31
BREAKING/ENTERING AUTO	291	242	226	337	228
BURGLARY ATTEMPTED	1	8	45	20	14
BURGLARY FORCED	535	587	440	475	248
BURGLARY UNLAWFUL	2	46	81	97	75
BUY/RECEIVE STOLEN PROPERTY	0	1	0	0	0
DISORDERLY CONDUCT	307	361	410	487	252
DISTRICT DEFINED	798	777	N/A	N/A	N/A
DOMESTIC VIOLENCE	3	8	9	6	12
EXTORTION	9	6	6	1	0
FALSE ALARM	N/A	298	4726	9479	5202
FORCIBLE FONDLING	0	14	5	2	3
FORCIBLE RAPE ATTEMPTED	0	5	1	2	0
FORCIBLE RAPE COMMITTED	0	7	11	7	4
FORCIBLE SODOMY	0	4	1	2	0

Table 2.10-2 (Continued)

TYPE OF OFFENSE	Year 8/31/98-8/28/99	8/30/99-8/27/00	8/28/00-8/27/01	8/27/01-8/25/02	8/26/02-3/31/03
GAMBLING	7	1	8	7	2
GRAFFITI	228	194	133	86	87
HATE CRIME	4	0	1	0	0
HOMICIDE	0	0	0	0	0
KIDNAPPING	1	2	9	3	7
LEWD & LASCIVIOUS	59	83	137	148	116
MISCELLANEOUS	2450	2527	3625	4030	3344
MISSING PERSON	N/A	N/A	87	142	124
NARCOTIC- POSSESSION	373	445	446	473	287
NARCOTIC -SELLING	15	12	27	17	9
NARCOTIC USE	57	60	57	32	17
OTHER MAJOR CRIMES	266	236	73	33	17
PICK POCKETING	0	1	2	1	2
PURSE SNATCHING	0	6	2	0	0
RECORD CHECK	134	154	180	179	89
ROBBERY	195	153	124	136	100
SEXUAL BATTERY	23	N/A	N/A	N/A	N/A
SEXUAL HARASSMENT	29	51	78	79	34
SEX OFFENSE	88	38	N/A	N/A	N/A
SIMPLE ASSAULT	720	710	812	595	296
SIMPLE BATTERY	1814	1771	2034	1825	1225
THEFT-BICYCLE	4	43	76	68	41
THEFT GRAND-PERSONAL	139	N/A	N/A	N/A	N/A
THEFT GRAND-SCHOOL	462	416	465	508	300
THEFT, MOTORCYCLE	0	2	0	2	0
THEFT-OTHER	7	1240	1305	1190	954
THEFT, PETTY-PERSONAL	1044	0	N/A	N/A	N/A
THEFT, PETTY-SCHOOL	507	382	318	341	215
THEFT TRUCK & BUS	0	0	1	1	0
THEFT-VENDING	1	11	26	28	14
TRESPASSING	529	467	434	341	247
VANDALISM	1802	1903	1537	1494	863
VEHICLE-FOREIGN/RECOVERY	0	30	38	41	22
VEHICLE-THEFT/RECOVERY	0	38	46	62	18
WEAPON POSSESSION	422	500	381	391	213
TOTAL INCIDENTS	15044	15951	20971	25266	16211
CASES CLEARED BY ARREST	2322	2963	2415	2277	1025
# ARRESTED	N/A	2981	3027	2522	1335
FIREARM INCIDENTS	60	56	52	52	28

Source: Miami-Dade County Public Schools, 2003

Objective 4

Continue to develop programs and opportunities to bring the schools and community closer together.

CDMP Monitoring Measure. Monitored by the Miami-Dade County Public School System by reporting and reviewing the progress and number of new and existing community oriented programs, including an enrollment analysis, by age and ethnicity, of adult, community and vocational programs.

Objective Achievement Analysis. This objective has been partially achieved. There are twenty-two Adult and Community Education Centers and seventy-four principal-operated after-school care sites located throughout the county. Depending on the center, some centers are strictly utilized for vocational programs during the day, such as the Lindsey Hopkins Technical Education Center. Though most of the centers are open only during the evening, such as the Miami Beach Adult and Community Education Center, as during the day the facility serves as a regular senior high school. These centers may also have other schools, such as elementary and middle schools that serve as satellite centers to the main adult and community center. Community schools offer a wide variety of academic, extracurricular, recreational, cultural, civic, health, social service, and workforce preparation programs for people of all ages. Interagency cooperation and community/business sector support are key components of the success of these programs. Data has been collected at the centers since school year 1995-1996 by gender, ethnicity, and age. The School District reports and reviews the progress and number of new and existing community oriented programs. This is part of the annual budget process that requires analysis for future budget allocation.

Policy Relevance. All policies under this objective continue to have relevance and should be retained. The following policies should be considered for modification.

Objective 5

Miami-Dade County Public Schools will continue to enhance effectiveness of the learning environment.

CDMP Monitoring Measure. Monitored by the Miami-Dade County Public School System by reporting the number of educational facility enhancements such as media centers, art/music suite, and science laboratories.

Objective Achievement. This objective has been partially achieved. The School District continues to improve existing educational facilities, through renovation and expansions to better accommodate increasing enrollment. From 1996 through 2002 there have been 149 construction projects at Miami-Dade County Public School facilities. These projects include construction of new schools, and facility additions, remodeling, and renovations. The project descriptions provided in the tracking system do not clearly distinguish in sufficient detail whether or not the project includes educational facility enhancements to media centers, art/music suites, or science laboratory facilities, although six projects listed do specifically mention media center in its description. Better reporting of actual renovations and expansions would probably reveal more of these types of projects being implemented.

Policy Relevance. All policies under this objective continue to have relevance and should be retained. The following policies should be considered for modification.

Objective 6

The establishment and implementation of mechanism(s) for on-going coordination and communication between the School Board, the County, and other appropriate jurisdictions, to ensure the adequate provision of public educational facilities.

CDMP Monitoring Measure. Addressed by implementing and tracking the development of appropriate mechanisms, including interlocal agreements and coordination efforts, which serve to expedite the provision or enhancement of public educational facilities.

Objective Achievement. This objective has been partially achieved. Ensuring that public school facilities are sited in a manner that conforms to planning objectives is an issue of countywide concern. The scarcity of adequate sites in some developed or developing areas, the need to ensure that adequate sites are available, and the adequacy of public facilities and infrastructure to serve new school facilities often limits the School Board's ability to site new schools in optimum locations. In addition, the impacts of new schools on other public facilities and infrastructure must be considered as well.

In 1992, Miami-Dade County Board of County Commissioners adopted a School Site Plan Review Resolution R-535-92. The resolution authorizes and directs the County Manager to review and make recommendations regarding the consistency of proposed public educational facilities and site plans with Miami-Dade County's CDMP and applicable land development regulations. The adopted procedures for such review, construction and opening of public educational facilities are coordinated in time and place with plans for residential development, concurrently with other necessary services.

Since 1995, Miami-Dade County Public Schools, pursuant to F.S. 235.193(4), has provided written notice to Miami-Dade County on its intent to acquire or lease property for a new public school facility. Miami-Dade County reviews each site for consistency with the CDMP Land Use Plan map, the Land Use Element interpretive text, and adopted CDMP policies, and provides a written response to the MDCPS. The county has issued 111 CDMP school consistency letters to the School District.

The School District has participated in the zoning hearing reviews and plan amendment process from 1995 through 2002. The School District reviewed and commented on approximately 1,152 zoning public hearing applications during this time period. The School District reviewed 116 applications to amend the CDMP during this time period, thirty-nine of these applications proposed to increase student population, fifty of the applications proposed a decrease in student population, and twenty-seven of the applications had no impact on student population.

In compliance with Sections 163.31777 and 1013.33, Florida Statutes, Miami-Dade County, twenty-four municipalities and the Miami-Dade County School Board entered into an interlocal agreement in March 2003 for the coordination of the land use and school facility planning. This agreement consolidates into one document all formal and informal coordination that has been occurring between the county and the school district since the early 90s. The agreement requires

that the location of public educational facilities must be consistent with local government comprehensive plans and implementing land development regulations. The agreement addresses: improving coordination of new schools with land development; providing for greater efficiency of the school board and local governments by placing schools to take advantage of existing and planned infrastructure; improving student access and safety by coordinating the construction of new and expanded schools with local road and sidewalk construction programs; using better defined urban form by locating and designing schools to serve as community focal points; and increasing the efficiency and convenience by co-locating schools with parks, ball fields, libraries, and other community facilities.

Policy Relevance. All policies under this objective continue to have relevance and should be retained. The following policy should be considered for modification.

Policy 6.5. This policy should be modified to provide for annually reviewing the Educational Facilities Impact Fee methodology and fee structure consistent with the provisions of the Interlocal Agreement.

APPENDIX 2.10-A
Miami-Dade County Public Schools Properties Acquired Between 1995 and 2002-03

FISCAL YEAR 1995-96

ACQUIRED PROPERTIES	CURRENT OR PROPOSED USE
Dante B. Fascell Elementary School. (State School "H-1") 15625 SW 80 St. (Condemnation)	Parcel for constructing a new elementary school
Parcel for the expansion of the former Ada Merritt Middle School (State School "B-1"/ Parcel 1) 312 SW 6 Ave. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary School.
Parcel for the expansion of the former Ada Merritt Middle School (State School "B-1"/ Parcel 2) 320 SW 6 Ave. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary School.
Parcel for the expansion of the former Ada Merritt Middle School (State School "B-1"/ Parcel 10) 621 SW 4 St. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary School.
Parcel for the expansion of the former Ada Merritt Middle School (School "B-1"/ Parcel 12) 326 SW 6 Ave. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary School.
Parcel for the expansion of the former Ada Merritt Middle School (State School "B-1"/ Parcel 5) 620 SW 3 St. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary School.
Parcel for constructing a Primary Learning Center for Gilbert Porter Elementary School 15751 SW 112 St.	PLC "Q"
Eneida Massas Hartner Elementary School (State School "E") 401 NW 29 St.	Parcel for the replacement of Buena Vista Elementary School
Parcel for the expansion of Shadowlawn Elementary School 141 NW 50 St.	Expansion
Parcel for the expansion of Shadowlawn Elementary School 119 NW 50 St.	Expansion
Parcel from the City of Miami Beach up to 55 acres to the Ojus Tract for the construction of State School "DDD" NE 215 St. and NE 14 Ave.	Dr. Michael M. Krop Senior High School
Parcel for the expansion of Thena Crowder Elementary School, 757-779 NW 67 St. (Condemnation)	School staff parking
Parcel for the expansion of Martin Luther King Elementary School, 1245 NW 71 Terrace	Expansion

FISCAL YEAR 1996-97

Parcel for the expansion of Martin Luther King Elementary School 1245 NW 71 St.	Expansion
Parcel for constructing a primary learning center for Jack Gordon Elementary School, 15001 SW 127 Ave.	PLC “S”
Parcel for the expansion of Miami Senior High School. 2500 SW 1 St.	Expansion
Parcel for constructing a new elementary school (State School "T") 14328 NE 2 Court (Condemnation)	Linda Lentin Elementary School
Parcel for the expansion of the former Ada Merritt Middle (State School "B-1"/Parcel 4) 610-612 SW 3 St. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary school.
Parcel for the expansion of the former Ada Merritt Middle (State School "B-1"/Parcel 3) 602 SW 3 St. (Condemnation)	Expansion of the current site to accommodate the new Ada Merrit Elementary school.
Parcel for constructing a new high school (State School "EEE") (35 acres), 15255 SW 96 St.	Felix Varela Senior High School
SW 72 St. and SW 162 Ave., (Rotolante Site) 2 acres	Donated September 1996

ACQUIRED PROPERTIES	CURRENT OR PROPOSED USE
FISCAL YEAR 1997-98	
South Transportation Center 660 SW 3rd Ave., Florida City	Facility was already built
SW 160 Ave. and SW 144 St. (Suchman Site) 7.5 acres	Donated February, 1998
SW 12 St. and SW 136 Ave. (Riviera Site) 1.504 acres	Donated August, 1997
FISCAL YEAR 1998-99	
State School JJ (10 acres purchased) NW 112 Ave. and theoretical NW 52nd St. (10 acres donated by developer)	Doral Middle
Armenian Apostolic Church Parcel 1 (1501 NE 1 Ave. & 1504 NE 1 Court) Parcel 3 (120 NE 16 St.)	MDCPS employees parking lot.
Armenian Apostolic Church Parcel 2 (1530 NE 1 Court)	MDCPS employees parking lot.
Sanford Land Property (Sandman Nursery) 20200 NW 37 Ave.	Litigation pending.
FISCAL YEAR 1999-00	
State School "PPP" (60 acres) SW 56 St. and SW 162 Ave.	Proposed for the construction of John A. Ferguson Senior High School
State School "VV1" (30 acres) SW 47 St. and SW 157 Ave.	Proposed for the construction of Lamar Louise Curry Middle School
State School "W1" (10 acres) SW 52 St. and 162 Ave.	Future elementary school
Future Educational Use (24.62 acres) SW 45th St. & 157 Ave.	n/a
Central West Transportation Center 13775 NW 6 St.	Facility was already built. District's Central West Transportation Center
South Dade Adult Center 109 NE 8th St.	Facility was already built. South Dade Adult Center
FISCAL YEAR 2000-01	
State School "C" (18.07 acres) NW 79 Ave. and South of N.W. 160 Terrace	Proposed for the construction of State School "C".
Hialeah Senior Expansion 117 East 47 St., Hialeah	This property in conjunction with the purchase of other four contiguous properties is proposed for the construction of a parking lot.
Records and Forms Management Warehouse 2740 NW 104 Court	Facility was already built. OIT Warehouse
FISCAL YEAR 2001-02	
Hialeah Senior Expansion 110 East 48 St., Hialeah	This property in conjunction with the purchase of other four contiguous properties fulfills the expansion needs of Hialeah.
Hialeah Senior Expansion 116 East 48 St., Hialeah	This property in conjunction with the purchase of other four contiguous properties fulfills the expansion needs of Hialeah Senior.
Hialeah Senior Expansion 109 East 47 St., Hialeah	This property in conjunction with the purchase of other four contiguous properties fulfills the expansion needs of Hialeah Senior.
Hialeah Senior Expansion 120 East 48 St., Hialeah	This property in conjunction with the purchase of other four contiguous properties fulfills the expansion needs of Hialeah Senior.
Northeast Transportation Center 5901 NW 27 Ave.	Facility was already built. District's Northeast Transportation Center.
NW 87 Ave. and NW 164 St. (Lowell) 1.96 acres	Donated on May 22, 2002.
SW 163 Court and SW 47 St. (Eden Lakes) 2 acres	Donated on May 22, 2002
FISCAL YEAR 2002-03	
State School "YY1" SW 157 Ave & SW 144 St. (8.832 acres)	Proposed site for State School "YY1"